PD-PA- 281 99
AID = 44888

April 15, 1983

INFORMATION MEMORANDUM FOR THE ADMINISTRATOR

THRU : ES

FROM : AA/ASIA, Charles W. Greenleaf, Jr.

SUBJECT: Asia Strategic Plan

Attached is the Bureau's strategy paper which analyzes Asia's development constraints and needs. It outlines a plan for an A.I.D. response between now and FY 1988.

In some respects, the process which the Bureau has gone through in preparing the plan is as important as the final product. We have argued about strategy at the working level, held intensive, carefully prepared conversations with mission directors in New Delhi, and reviewed preliminary strategy documents with the Agency's technical directors from the Science and Technology Bureau. One area of possible large significance, rainfed agriculture, was the subject of the Bureau's recent agriculture officers' conference in Hyderabad, attended by a number of distinguished scientists from outside the Agency.

We also have conducted a series of low key consultations with outside experts in other disciplines.

Finally our CDSS reviews, just completed, have provided a more detailed basis for judgments contained in the sector and subsector strategies.

Attachment:
Asia Bureau Strategy

ASIA REGION STRATEGIC PLAN

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ASIA STRATEGY

SUMMARY SECTION

Over the coming five years we will carry out two major new program developments: increased private enterprise programming; and new concepts of program design in the still poor but rapidly progressing countries of Southeast Asia.

Asia-wide we will sharpen and intensify the current focus on analysis and reform of economic policies, the design of science and technology elements in the program, and the strengthening of institutions critical to the development process.

Many ongoing activities will require continued support. Real progress in alleviating poverty demands a steadfastness of purpose in many areas. In this sense we will stay "in" more activities than we will move "out" of.

Generally, we will be "out" of costly programs to create physical infrastructure. Major rural electrification, rural roads and integrated area development programs, for example, generally are beyond our means as a donor and do not represent a comparative advantage for A.I.D. and the U.S. We will count on the MDB's and increasingly, the countries themselves to foot the bill for these investments. (The large ESF program in Pakistan will be something of an exception to this rule.)

Since we expect to emphasize the application of relevant technologies in which the U.S. is strong, technical assistance will be a large part of the program. But it cannot be all the program. Capital assistance, carefully linked to technical assistance and training, will be needed to demonstrate institutional and technical solutions to complex problems.

Private enterprise programming will require intense and creative efforts for most of this decade. It will be a multi-dimensional effort carried out through policy dialogue, institutional strengthening, development finance, and information exchange. It will take time, and there will be failures as well as successes.

In shaping a strategy for the more rapidly growing Asian countries, one must look with a hard eye at the political realities. But the character of our programs in these rapidly developing countries, basically the Southeast Asian group, should begin to be modified in the next five years and beyond to reflect their changing status. The very poor and generally large countries of South Asia remain the region's, and indeed the world's, major development challenge. We have helped at great cost to lay some foundations for sustained

growth and development in the subcontinent. Our intellectual contribution to a constructive development process in South Asia can be great, but we must also plan to make a best effort on the material contribution side.

Poverty alleviation remains the underlying purpose of A.I.D. programs in Asia. As we shall argue, economic growth in the context of equitable social and economic policies is essential to this goal. The A.I.D. program has much to offer in encouraging this kind of growth.

A brief sectoral discussion of the evolving Asia Bureau programs follows:

Agriculture and Rural Development

Support for research, extension and education, and for irrigation and water management will continue to form the core of our agricultural programs. With the exception of Pakistan and Bangladesh the Bureau will be out of rural electrification and major road building. While the downstream components of watershed management and irrigation must be approached on an "integrated" basis, we do not intend to undertake traditional area development projects with their wide ranging multisectoral investments.

Increased emphasis will be placed on developing the institutional and manpower resources necessary for countries to plan and implement their own development efforts, as well as to support major infrastructural investments being made by multilateral donors and the countries themselves. We will do this by providing high payoff scientific and technical assistance and by continuing our commitment to training. We will put particular emphasis on extension and education to take increased advantage of our land grant institutions. Selected rainfed agricultural problems will be addressed, including watershed management and agro-forestry. Community management of local resources, improved economic analysis capacity to deal with policy issues, and increased utilization of the private sector for sales, service and marketing of agricultural inputs and produce will also characterize our agriculture and rural development efforts.

"Pure" resource transfers have already been eliminated from our agriculture program. We will continue to supply fertilizer in Bangladesh to stimulate policy reform.

Most Missions also intend to begin or expand activities to stimulate rural enterprise and agribusinesses with strong backward linkages to small farm production.

Population, Health and Nutrition

Population growth at high rates will remain a central development concern throughout the region well beyond the period covered by the regional strategy. However, national programs have advanced to the point in Indonesia and Thailand that A.I.D. assistance can gradually be reduced and redirected towards new priorities. This process is beginning and will be nearly completed in Thailand, and well underway in Indonesia, by the end of the strategy period. Large-scale support for population and family planning programs will continue wherever possible elsewhere in the region.

In health, the emphasis will continue to be on the extension and improved management of selected primary health care services. We will not be supporting construction but will be heavily involved in most countries in technical assistance, training, and research, particularly in identifying mechanisms for self-financing of health services.

Nutrition will be incorporated in both primary health care and agriculture sector analysis and policy work. Nutrition concerns will thus be reflected in the activities of all missions in these two areas.

Energy and Natural Resources

Programs in this sector will address the energy and natural resource constraints to rural development, with particular emphasis on increasing productivity in agriculture and rural industries. The unifying theme will be policy and management with respect to forest and bioresource systems. Centers of excellence in training and research will be supported at the national and regional levels. A.I.D. programs will promote private investment in wood and economically viable alternative energy sources, e.g. coal. We will phase down and possibly out of pilot activities involving solar and wind technologies, but will continue to search for cost-effective renewable energy sources via R&D projects. A major expected accomplishment will be the establishment, in cooperation with the S&T Bureau, of a fuelwood research network in Asia.

Education and Human Resources

The Bureau is currently rethinking its nearly complete lack of basic education projects. While we currently support and will continue activities in agricultural education and participant training, the Bureau has avoided involvement in primary education, basic literacy,

or basic skills training for several years. We are now considering a limited involvement, probably at the policy and operations research level, in programs of basic literacy and skills training for women in those countries where the lack of such skills has proven to be an important barrier to development, principally Pakistan, Nepal, Bangladesh, and parts of India. Of particular importance in considering this issue is the evidence that progress in population, health, and livelihood activities is severely constrained by female illiteracy and lack of cognitive skills.

Indonesia will continue to represent the Bureau's largest effort in education because of the combination of its particularly severe human resource constraints and opportunities to do effective work. Basically we will be involved in training at many levels of the public and private sector, as well as in educational planning.

Agency "Common Themes"

The Bureau is carrying out a joint project with S&T in the area of water management. A new forestry "common theme" project is expected to begin in FY 1984, as is a project to support work in several countries on upper respiratory diseases. We are actively exploring with the S&T Bureau additional opportunities for collaboration, rainfed agriculture and community management representing strong possibilities.

Our collaboration with the PRE Bureau is satisfactory and improving.

THE ASIA REGION: A DEVELOPMENT OVERVIEW

1. Need

Because of the continuing huge concentration of very poor people in South Asia, the Asia region contains 75-80 percent of the world's poor -- those falling below bare minimum food and other basic consumption standards. The average GNP for the region is only $224 compared to $278 for Africa, $769 for Latin America and $970 for the Near East.

Asian low income countries are worse off than comparable low income countries in other regions -- with crude birth rates of 38 per 1,000 vs 29 per 1,000 for the non-Asian countries, life expectancy at birth 53 years compared to 57 years, and daily per capita caloric supply as a percentage of total requirements 78 compared to 83 percent.

Food production remains a problem in much of Asia. Despite record levels of foodgrain production in recent years for India, Bangladesh and Pakistan, these countries must raise their production even further so that consumption standards can be maintained or modestly increased in the face of population increases, as well as to provide security against the ever-present threat of drought.

Population pressures are immense. The A.I.D. assisted Asian countries contain twice as many people as the combined populations of Africa, Latin America and the Near East. Per capita food production for the most populous countries -- India, Bangladesh and Pakistan -- is presently below 1969-71 levels.

Oil imports absorb approximately 70 percent of the export earnings of the South Asian countries and have caused a 4-6 percent loss in real income for Thailand and the Philippines. The recent decline in oil prices should improve this situation somewhat.

high infant and child mortality rates make these groups the most vulnerable in the Asian countries.

The private sector, both indigenous and U.S., is generally underutilized in the development process.

2. Politics and Society

The post-World War II history of U.S. relations with Asia embraces both remarkable positive changes in the U.S.-Asian relationship and some deep continuing problems. Japan has become the world's second strongest economic power and inevitably will develop the political muscle to use that power. China, once regarded in profoundly inimical terms, has opened its doors -- though not far -- to outside help in training a new generation of intellectual leaders and in moving its economy more rapidly. South Korea's recent economic performance has astounded the world, as has that of Taiwan. Both are A.I.D. graduates. In Vietnam, where America expended so much blood and money, the economy has drifted since the Vietnam War as its communist leadership tightens its military and political grip on the Indochinese peninsula. In contrast, non-communist Southeast Asia in the past decade generally has displayed great economic vitality. The huge poor populations of the Indian subcontinent continue to pose the largest challenge in terms of economic development, and since the 1980 Soviet invasion of Afghanistan the subcontinent is also a source of major political concern.

Underlying the political history of this period are a number of significant and lasting developments. U.S. trade and investment in Asia have grown to very large proportions. Asian immigration to the United States has reached record levels. For the first time in U.S. history, a high-achieving pan-Asian minority enriches the life of our country. U.S. cultural and intellectual involvement with Asia has grown greatly since the 1950's -- a dozen first-rate university centers do research on and teach about Asia. The number of Americans who have experienced a personal involvement with Asia is large.

Irrespective of their formal government structures, Asian societies remain extremely hierarchical. Whether Sinic, Javanese or Indian (Moghul or British) in tradition, most Asians regard development as a top-down phenomenon, to be imposed or granted by those on top. Most Asian governments regard their control over society as weak, and Western concepts of decentralization and community responsibility -- although they are accorded much lip service -- remain essentially contrary to deeply rooted Asian views about how the world should function. This is visible not only in government bureaucracies and political machines but also in scientific research and academic teaching.

Asian social attitudes are sometimes counterproductive in development terms. In large parts of Asia (although not universally -- and much less so in Northeast Asia today) merchants, traders and businessmen are viewed with little respect. Peasants merit even less. Government remains the favored occupation. As the modern professions arise, they become invested with enormous authority and rapidly become conservative, as witness the irrigation engineers, the doctors, the foresters, and other scientific professions as well. Brahmanism and Confucianism are as one in this regard.

Asian societies have nonetheless managed to carry out a remarkable amount of adaptation, digestion and change. Despite the weight of tradition, these societies are politically and in some cases even constitutionally dedicated to change: no Asian government can survive without a commitment, however poorly honored, to development. The process of change is spurred by example. Successful change in Northeast Asia is a powerful instrument for present and coming changes in Southeast and South Asia. In particular, the role in the Northeast Asian case of the private sector has not passed unnoticed. It is pertinent to note that the Northeast Asian example shows private enterprise moving forward at a rapid rate <u>without</u> reducing the power of government.

3. Economic Performance and Prospects in Asia

There has been significant economic progress in the Asia region over the past two decades. On the average, growth was slower during the 1970s than in the 1960s for South Asia, but more rapid for East Asia. For the South Asia region as a whole, the growth rate of GDP declined from 4.3 percent to 3.2 percent.1/ Within the region performance varied. Bangladesh, India, and Nepal grew at about the same rate; Burma's economic performance improved significantly; and Pakistan's growth rate dropped sharply. Economic growth in Sri Lanka slowed moderately.

TABLE 1

Economic Growth

Country	Per Capita Income (1981) (U.S. $)	Growth in Per Capita GNP 1960-1980	Growth in GNP 1960-80	Growth in GDP 1960-70	Growth in GDP 1970-80
Bangladesh	140	0.0	2.5	3.7	3.9
Nepal	160	0.2	2.4	2.5	2.5
Burma	180	1.2	3.6	2.7	4.6
India	250	1.4	3.4	3.4	3.6
Sri Lanka	300	2.4	4.4	4.6	4.1
Pakistan	350	2.8	5.8	6.7	4.7
Indonesia	520	4.0	6.2	3.9	7.6
Thailand	770	4.7	7.6	8.4	7.2
Philippines	790	2.8	5.7	5.1	6.3
Low-Income Countries (w/out China/India)	n/a	1.0	3.5	4.4	3.5
Middle-Income Oil Importers	n/a	4.1	6.5	5.8	5.6

For the East Asian countries there was overall improved performance during the 1970s, as economic growth accelerated in Indonesia and the Philippines. Thailand's growth rate fell somewhat, but remained high.

Available evidence on income distribution and poverty in the Asia region suggests that where economic growth has been rapid, low-income groups have in most cases benefitted significantly. Data for individual countries on the income share of the lowest 40 percent of income recipients reveal on the whole a moderate rising trend in these shares over time. While these data are subject to considerable error, there is no evidence of a systematic upward bias over time.

TABLE 2

Income Shares of the Lowest 40 Percent of Income Recipients

India		Burma		Bangladesh		Nepal	
Year	Share	Year	Share	Year	Share	Year	Share
1960	13.6			1964	17.9		
1963/64	17.2	1958	16.5	1967	19.6		
1975	16.2	1972	21.0	1974	18.2	1976	12.6

Pakistan		Sri Lanka		Indonesia		Thailand	
Year	Share	Year	Share	Year	Share	Year	Share
		1963	13.7			1962	14.9
1964	17.5	1970	19.2	1976	14.4	1968	15.9

Philippines	
Year	Share
1970	14.2

Estimates of trends in absolute poverty are available only for the rapidly growing East Asian economies. Overall, the evidence supports the hypothesis that rapid growth can have significant effects in terms of alleviating absolute poverty. For Thailand, the incidence of absolute poverty has dropped sharply and steadily from 57 percent in the early 1960s to somewhat above 30 percent in the mid 1970s. This overall decline reflected declines in both urban and rural areas. In Indonesia, the incidence of absolute poverty fell from above 50 percent in 1970 to less than 40 percent in 1976. Declines occurred in both urban and rural areas, in Java and in the other islands. In the Philippines, the incidence of poverty declined sharply between the mid-1950s and mid-1960s (from 72 to 43 percent), remained unchanged through 1970, and then rose to around 53 percent.[2/]

The deterioration in performance with respect to poverty alleviation in the Philippines has been attributed to several factors. First, production in agricultural subsectors and regions that have the most direct influence on the incomes of the poor was adversely affected by several years of bad weather and pest attacks during the early 1970s. Since the mid-1970s, growth in these subsectors and regions has been much more rapid. Second, growth in manufacturing employment has been extremely slow in the Philippines -- less than 2-1/2 percent -- compared with growth rates of more than 6 percent in Indonesia and Thailand. This weak employment performance, as well as a decline in real wages, has been attributed to high rates of protective tariffs, import licensing, and artificially low interest rates that encouraged inefficient and capital-intensive investment, to the detriment both of employment creation and economic growth.3/

This brief review suggests that development prospects for the Asia region over the remainder of the 1980s hinge importantly on sustaining economic growth in countries where growth has been rapid, and accelerating economic growth in the lower-income countries, where growth has been slower. Further, it is evident from past experience that economic growth needs to be not only rapid but also broadly based if the development objectives of alleviating poverty and meeting basic needs are to be achieved. It is particularly important that growth in agriculture and manufacturing entail significant and widespread increases in employment and incomes.

What are the prospects that such growth will take place? First, it is important to note that, while economic performance in the 1970s was in many respects less satisfactory than in the 1960s, economic growth for most Asian countries accelerated significantly during the latter part of the 1970s and early 1980s. This was particularly true for the South Asian economies. Table 3 gives data for trend growth rates in GDP for two slightly overlapping sub-periods, the early and the late 1970s. For three countries -- Burma, Pakistan and Sri Lanka -- the improvements were quite sharp, to growth rates at or near 6 percent. If sustained, this sort of growth would permit increases in per capita income at rates well above 2-1/2 percent, which would be expected to lead to significant alleviation of poverty. Improvements in India and Bangladesh were less dramatic, but still significant. Only in Nepal is there a pattern of persistent economic stagnation.

TABLE 3

Economic Growth During the 1970s
South Asia

Country	1969-1976 GDP	1969-1976 Agriculture	1975-1981 GDP	1975-1981 Agriculture
Bangladesh	2.5	0.0	4.3	2.2
Nepal	2.4	-1.2	2.4	0.2
Burma	2.3	1.8	5.9	6.6
India	2.5	1.7	4.0	1.9
Sri Lanka	2.7	.9	5.7	4.7
Pakistan	3.8	1.6	6.1	3.8

In the East Asian countries, growth performance was more uniformly satisfactory, without particularly large differences over the course of the decade. For all three countries, GNP growth was in the 6-7 percent range for both sub-periods, with only minor variations between periods.

This improved performance in South Asia, and continued good performance in East Asia, suggest relatively successful adjustment to the economic dislocations and shocks of the 1970s. In discerning prospects for the 1980s, it is important to look at the determinants of past performance, including international economic factors, exogenous political and weather related shocks, and the domestic policy response to these factors.

Clearly the most important international economic factor affecting the performance of the Asian economies was the oil price increase.[4/] For the South Asian economies as a group, oil imports as a percent of total imports rose from 4 percent in 1970 to 18 percent in 1975 and over 33 percent in 1980. The share of total export revenues claimed by oil imports increased from 5 percent in 1970 to 23 percent in 1975 and 50 percent in 1980.

The effects of increases in the price of oil on terms of trade have been dramatic. For the larger South Asian economies, movements in the terms of trade are set forth below.

Table 4
Terms of Trade
(1970=100)

	1970	1975	1980
India	100	66	47
Pakistan	100	67	50
Bangladesh	100	42	35
Sri Lanka	100	54	50
Burma	100	114	81

Less direct effects of the oil price increase on the South Asian economies include depressing effects on export prices (reflected above) and volumes as a result of recession in the developed countries. In this respect price effects were stronger than volume effects. Analysis of export performance of the South Asian economies indicates that diversification of exports among country groups (including oil exporters and other developing countries) and also among product groups helped the South Asian economies sustain export volumes relatively well during the 1970s.

What factors helped the South Asia economies adjust successfully to adverse international economic developments? Analyses carried out at the regional level focus on three important factors. First, agricultural performance was much improved during the latter half of the 1970s, the result of good weather, improved policies, and the cumulative effects of development efforts in that sector (see Table 3).[5/] Second, workers remittances from capital-surplus oil exporters were an important factor, especially for the larger economies, and for Sri Lanka. Third, concessional foreign assistance increased significantly, enabling recipients to sustain import levels and economic growth without excessive accumulation of debt.

Policy reforms played an important role in accelerating economic growth in the South Asian countries. Sri Lanka's improved growth performance is directly attributable to policy reforms initiated in 1977 as well as to large increases in foreign assistance. These policy reforms provided for increased reliance on market forces and a greatly enhanced role for the private sector.[6/] Burma's improved performance since the mid-1970s stems

from a series of economic reforms, including important tax and pricing reform, and the government's introduction of an agricultural intensification program. The acceleration of economic activity in Pakistan since 1977 was associated with improved fiscal policies, increased incentives to agricultural producers, and a greater role for the private sector in industry.

The effects of the oil price increase and associated adverse movements in the terms of trade were even more severe for the more open economies of Thailand and Philippines.[7] Effects on export volumes were not particularly dramatic, as both countries were able to sustain export growth relatively well. Thailand was particularly successful in this respect.

As was true in the case of the South Asian economies, improved agricultural performance played an important role in enabling both Thailand and the Philippines to maintain high rates of economic growth during the latter part of the 1970s. Export growth was also a significant factor. Thailand was relatively more successful in containing increases in current account deficits through import substitution and export expansion. The Philippines relied more heavily on capital inflows. For Thailand, the debt service ratio at the end of 1981 was about 15.5 percent, only slightly higher than in 1970. For the Philippines, the debt service ratio in 1981, was 18 percent but by 1982 this had deteriorated to about 23 percent.[8]

As during the 1970s, economic performance of the Asian economies during the 1980s will be affected by international economic developments, other exogenous factors such as weather and political crises, and by the economic policy responses to these developments. During the 1970s, increases in oil prices had direct adverse effects on all of the oil importing Asian economies. Indirect effects (through recession in developed countries) were less severe. These effects were mitigated to a considerable degree by good agricultural performance, by workers' remittances and foreign capital inflows, and by improved policies.

There are grounds for believing that international economic developments during the 1980s will be more favorable in many respects than during the 1970s. Upward movements in oil prices will be considerably less sharp, unless important sources of supply are cut off by political developments. Inflationary forces and expectations in developed countries have subsided significantly, providing a setting conducive to steady non-inflationary growth. Economic recovery appears to be underway in the industrialized countries. The pace and duration of the recovery, and the effects in terms of inflationary pressures, remain to be seen.

At the same time there are grounds for believing that international financial flows will play a less supportive role in sustaining growth in the Asian economies. Workers' remittances will be constrained by trends in oil prices. Private non-concessional capital flows may well be limited by concerns about the debts of major developing countries other than the ones under consideration here. Concessional foreign assistance will probably not expand as in the 1970s. The effects of lower or more stable oil prices on capital flows from oil exporting countries -- both concessional and non-concessional -- will surely be negative.

To the extent that Asian countries have until now maintained economic growth mainly through reliance on external capital flows to finance large current account deficits -- the case for the Philippines and several of the South Asian economies -- the prospect of a reduced role for capital flows in sustaining growth means that continued growth will depend crucially on economic policies that promote adjustment in the structure of production and demand. This will be true even under relatively optimistic scenarios of trends in oil prices and economic recovery in industrialized countries. Even without further deterioration in terms of trade, current account deficits will remain large and possibly unsustainable unless growth proceeds along patterns that include greater reliance on local resources, increased production of exports and efficient import substitutes, less dependence on imported energy, and continued improvements in agricultural performance.

The most recent IBRD scenario for 1980-90 envisions economic growth for the South Asian economies at an average rate of 3.2 percent in the low case and 4.4 percent in the high case.[9] The low case growth rate is the same as the rate for the 1970s, and the high case growth rate is about the same as in the 1960s.[10] The assumptions that distinguish the low and high cases have to do with rates of growth in GDP and trade for the industrial economies, expected levels of concessional and non-concessional capital flows, and protectionist pressures. Analysis of earlier IBRD scenarios suggests that for South Asian economies, the outcomes are fairly insensitive to assumptions about industrial country growth and protectionist pressures. In contrast, variations in assumptions about capital flows have discernible effects on projected growth. More important than any of these factors are domestic economic policies, and exogenous factors such as weather that affect agricultural production.

The more rapidly growing East Asian economies -- Indonesia, Thailand, and the Philippines -- have been successful in maintaining

high rates of growth over extended periods. These countries will be more positively affected by more vigorous growth in developed countries. If suitable adjustment policies are followed to lessen reliance on external capital flows (and on energy exports in the case of Indonesia) the prospects for maintaining economic growth at rates around 6 percent or higher in these countries are quite good.

What are the implications for A.I.D.s strategy in Asia? First, it is clear that progress towards meeting basic needs and alleviating poverty, especially in the low-income countries of the region, depends on achieving more rapid, broadly-based growth. Experience of the East Asian countries suggests that if such growth can be achieved, the effects in terms of poverty alleviation are likely to be significant. Second, the primary determinant of success in this endeavor will be the economic policies implemented by the Asian countries. There have been striking examples within the region of improved economic performance in response to improved policies, even in the face of adverse international economic developments. Third, the prospect of a lessened role for foreign capital inflows in sustaining economic growth suggests that it is more important than ever for countries to make effective use of what resources are available.

From these general observations several more concrete implications flow. First, policy dialogue and other measures to promote effective economic policies should receive reinforced emphasis. Second, greater reliance on the private sector is highly desirable as a means for making more economical use of existing resources, provided the policy setting is one which promotes the role of market forces. Third, greater efforts in the area of institution building and transfer, adaptation and dissemination of technology can make significant contributions to more effective use of available resources.

Among sectoral emphases, the crucial role of growth in agriculture in helping countries sustain overall GNP growth is well documented by the record of the past decade. Evidence on the contribution of investment in human resources to economic growth is less direct (because the linkages are more complex) but no less impressive. Further, such investment helps insure that growth will not only be rapid, but also broadly based. Finally, the adjustment problem that faces most of the countries in the region is in large measure one of conserving foreign exchange. A major element of this problem is the high cost of imported energy. A major part of the solution is to diminish reliance on imported energy, while conserving the natural resource base. Effective assistance efforts in these sectors can make a major contribution to successful adjustment and sustained economic growth.

FOOTNOTES

1/ According to the World Development Report 1982, GDP differs from GNP by the amount of net factor remittances from abroad.

2/ See "Aspects of Poverty in the Philippines", IBRD 1980; "Income Growth and Poverty Alleviation in Thailand", IBRD 1980; and "Indonesia Growth Patterns, Social Progress, and Development Prospects", IBRD 1979.

3/ These policies retarded output growth as well as employment growth. Over the 1970s, value added in manufacturing grew at about 7 percent in the Philippines, well below growth rates of about 10.5 percent in Thailand, and 12.5 percent in Indonesia.

4/ Much of what follows is based on "An Analysis of Developing Country Adjustment Experience in the 1970s: Low-Income Asia", IBRD Staff Working Paper #487, August 1981 by Christine Wallich and on analysis and data contained in various issues of the World Development Report.

5/ The low trend growth rate of agricultural production in India during the late 1970s reflects the large drop in production in 1980. Output recovered in 1981, to the very high levels observed in 1978 and 1979.

6/ Since 1981, further progress has been jeopardized by poor budgetary performance.

7/ Much of this discussion is based on Bela Balassa "The Policy Experience of Twelve Less Developed Countries, 1973-78", World Bank Staff Working Paper #449, April 1981; Parvez Hasan "Growth and Structural Adjustment in East Asia", World Bank Staff Working Paper #529, March 1982; and various issues of the World Development Report.

8/ Source: "Thailand: Second Structural Adjustment Loan", IBRD March 1983, "Philippines, Regional Cities Development Project", IBRD March 1983, and Hasan op. cit.

9/ World Development Report 1982, p. 37.

10/ The data for GDP growth for individual low-income Asian countries (Table 1) are difficult to reconcile with the average rates for the group cited here, particularly the figure of 3.2 percent for the 1970s.

DEVELOPMENT MODELS FOR THE ASIA REGION: TWO PERSPECTIVES

There are obvious similarities throughout South and Southeast Asia in terms of development needs, political and social life, and economic trends. The continuing importance of agriculture and the demographic dilemma are common to all A.I.D. assisted countries in Asia. But balanced against the commonalities are an array of differences with important implications for A.I.D. programming. The following section describes and analyzes these differences from two points of view.

1. The South Asia/Southeast Asia Dichotomy

One can broadly define two groups of countries -- the first displaying low growth, very low income and a high incidence of absolute poverty and the second with medium to high growth, low to middle income, and relatively low absolute poverty incidence. The low growth/low income countries are roughly those of South Asia and the countries making more rapid progress are those in Southeast Asia.

Transformation of the economy from agriculture to manufacturing is more advanced in Southeast Asia. The average annual growth rate of industry and industry's percentage of GDP significantly exceeded that of agriculture in Indonesia, the Philippines, and Thailand during the period 1970-1980. In South Asia, meanwhile, agriculture remains by far the principal engine for growth, employment and income.

Family planning efforts have achieved strikingly dissimilar results in Southeast and South Asia. The successes of national programs in Indonesia, Thailand and (to a somewhat lesser extent) the Philippines make it likely that these countries can achieve their goal of a drop in birth rates to 25 per thousand by the year 2000. The slower growth of family planning in India and difficulties encountered in mounting effective programs in Pakistan and Bangladesh make such a goal unrealistic for the subcontinent.

With respect to energy, one Southeast Asian country (Indonesia) is a major exporter of petroleum products while another (Burma) considers itself self-sufficient. And while Thailand and the Philippines have suffered a worsening balance of payments as result of the increased cost of petroleum, they are in a better position to meet those costs while developing their own energy sources than are the economies of South Asia, in particular

those of Bangladesh and Sri Lanka. Conservation of natural resources assumes critical priority for countries such as Nepal, India, Bangladesh and Pakistan where firewood is the only energy source for large populations and satisfying this demand wreaks havoc on the land.

Although throughout all of Asia a new and welcome appreciation of the free market is observable, that attitude has taken hold most firmly in Southeast Asia. Government interventions in the private sector in Southeast Asia, although large and frequently disturbing, are generally less crippling than in the South Asian countries. Both Thailand and the Philippines enjoy vibrant private sectors that thrive in environments generally conducive to their growth. By contrast, the large South Asian countries still present a daunting panoply of policy, regulatory, and administrative restrictions.

In economic policies, the Southeast Asian countries tend to be more market oriented whereas despite recent progress the room for reform in most of the South Asian countries is substantial.

This is not to suggest that the more dynamic picture in Southeast Asia means these countries have achieved middle income status. Indonesia is exceedingly poor, and Thailand and the Philippines both have far to go in many respects. But within Asian terms of reference we remain convinced that the sub-regional dichotomy between low income (South Asia) vs low-middle income (Southeast Asia) is valid.

A final example of Asian diversity is found in the narcotics problem, a serious one in some of the poorest countries e.g. Pakistan and Burma as well as one of those making more rapid economic progress, e.g. Thailand.

2. A Social and Institutional Perspective: Three Groups Rather Than Two

Introducing social and institutional data (thirteen indicators assembled by the Asia Bureau) reveals several important qualifications to the broad subregional dichotomy previously described. For example:

-- Sri Lanka is much better off than any other South Asian country and has a composite "score" in the same range as Thailand and the Philippines.

-- Indonesia is less developed than either Thailand or the Philippines, but still scores considerably better than any of the South Asian countries except Sri Lanka. Indonesia is very much an intermediate case, as a growing, oil based country with weak social and institutional development. In this regard, both India and Burma are more advanced than Indonesia in some respects. In terms of economic production, however, Indonesia has a clear advantage.

The three groups of countries which emerge from a social and institutional analysis follow:

A. Highest Group -- Thailand, the Philippines and Sri Lanka

Sri Lanka's position in the top three is based primarily on its social indicators, while it lags considerably behind Thailand and the Philippines in its economic position. The per capita GNP for the Philippines and Thailand is $790 and $770 respectively, compared to Sri Lanka's $300. In contrast, Sri Lanka's per capita GNP is much closer to levels in Pakistan ($300), India ($250) and even Indonesia ($320). During the ten year period 1970-80, Sri Lanka's average annual growth rate was much closer to the middle group and Bangladesh than to Thailand and the Philippines. Finally, the average annual growth rate of exports in Sri Lanka during the decade of the 1970s has actually been negative and is worse than Bangladesh's. By dramatic contrast, in social areas such as population growth rates, crude birth and death rates, life expectancy, child death rates, and adult literacy, Sri Lanka is equal to or better than the Philippines and Thailand. Economic performance is, of course, improving since the establishment of a more market-oriented economic system some six years ago.

There are differences as well as similarities between Thailand and the Philippines. The Philippines is among the world's top 20 countries in the size of its debt service payments. It is estimated that the Philippines debt service amounted to more than $1.5 billion in 1981 and 1982. It has a debt service ratio estimated at 23 percent -- higher than any other Asian country with the special exception of Burma. The Philippines' outstanding debt is $13.9 billion, while Thailand's is half of that level. Also, the growth of the labor force is faster in the Philippines than in Thailand and the Philippines has a higher agricultural population per unit of arable land. Moreover, the Philippines falls short of Thailand on most social data, particularly in health.

B. Middle Group -- Indonesia, India, Burma

In terms of social and institutional criteria, these countries group together quite naturally. Life expectancy is in the low-50's; crude birth rates per thousand in the mid 30's; and crude death rates in the 13-14 per thousand range. Child mortality and primary school enrollments are better in Indonesia, though Indonesia is clearly not in the same league as Thailand, the Philippines and Sri Lanka on these and most other social measures.

Economically, Indonesia leads the middle group though here too there are certain weaknesses, e.g. a heavy debt burden, which may become more troublesome as oil prices fall. In fact, Indonesia's total outstanding debt, $24 billion, is only exceeded by India's $24.7 billion. Moreover, agriculture still comprises about one-third of Indonesia's total output of goods and services, putting it much closer to India and Burma than to Thailand and the Philippines. Indonesia has other economic characteristics similar to the "highest" group of countries, but its economic resiliency will only be determined after the effect of the decline in oil prices is fully known.

Institutionally, in terms of science, technology and higher education, India is well but very thinly developed because of the huge portion of its population which remains outside of the modern world.

C. The lowest group -- Pakistan, Nepal, Bangladesh

This group shares a much less developed set of social and institutional characteristics, e.g. life expectancy of 50 or below, very high population growth, and low school enrollment. Though Pakistan has done somewhat better on most economic measures, and considerably better in terms of GNP growth, there are important manifestations of poor performance, e.g., resource mobilization for investment.

THE A.I.D. PROGRAM IN ASIA

1. Program Continuity

Primary A.I.D. efforts in the region have been directed towards the agricultural sector. About three-fourths of our assistance has been allocated to this sector -- to build research and other development institutions, to adapt and transfer technologies, to identify and encourage the adoption of policies that stimulate production, and to finance infrastructure. The private sector role has often been stressed, e.g., in the Bangladesh fertilizer program which has brought about significant privatization of fertilizer handling. Emphasis in the irrigation sub-sector has included not only the development of irrigation infrastructure but also better water management practices, erosion control, and the formation of local water user associations.

A.I.D. has done pioneering work in population. Successes include decline of the birthrate in Java, private sector marketing of contraceptives in Bangladesh, and the achievement of a 60 percent contraceptive prevalence rate for married couples in Thailand. About 15 percent of the Bureau's funds are allocated to this sector.

Less than 10 percent of the Bureau's resources are allocated to health, where the program concentrates on primary care and education, particularly for the benefit of infants and small children ages 1-5. Malaria is a continuing emphasis.

In energy, the Bureau has projects in nearly every country to demonstrate ways to reduce dependence on petroleum imports -- in Thailand by developing mini-hydro power for village electrification, in Nepal through conservation assistance, and in the Philippines through rural wood energy conversion schemes under ESF. The two major forestry programs in India address local needs for fuelwood and other forest products through village woodlot development and strengthening of state forestry extension services.

With respect to policy reform, the Bureau has concentrated on agriculture where price controls, government subsidies for consumption, and insufficient storage facilities have had an adverse impact on agricultural growth. The use of our dollar and PL 480 assistance to Bangladesh has been focussed, with considerable success, on reforming these agricultural policies.

The Bureau has programs in several countries to meet the needs of particularly depressed geographic areas. In Thailand, emphasis has been placed on providing opportunities for economic growth in the northern and northeastern regions of the country where poverty is most pervasive. Our activities in the northern part are also directed to finding crop alternatives to the growing of opium. In Nepal, programs are focussed mainly on the hill areas where most of the poor are living. In the Philippines, we have concentrated a significant portion of our limited resources in selected poor regions.

ESF has been programmed with development as well as foreign policy considerations very much in mind. The program in Pakistan is cast in a strong development mold, and that of the Philippines is directed to the achievement of important economic and social objectives within a fast disbursing framework.

2. Change: Major Themes

The Asia Bureau is modifying its programs to emphasize policy reform, the private sector, institution building, technology transfer and PL 480 integration. With some variation among countries and themes, these emphases have consistently been present. But the recent trend has been to intensify efforts along these lines.

Policy reform, long the keystone of our Bangladesh program, is receiving greater attention in Pakistan, India, Thailand and Indonesia.

Private enterprise work is underway in Indonesia, Thailand, Sri Lanka and (prospectively) India and Pakistan. In all countries, the private sector is being worked into our conceptual and analytical development frameworks. We look to the private sector for contributions to a number of complex development challenges.

As concerns institution building, historically the Asia programs have been strong in this respect. We intend, however, to give still greater attention to the basic institutions which address development issues.

Our programming increasingly is technology (as opposed to resource) intensive. Thus, we have moved out of rural credit wherever we have perceived little impact on technology transfer or institutional development. We have concentrated on areas

such as irrigation, watershed management, agriculture research, training, and forestry, in which technology is highly relevant. Capital transfer is being minimized and technical transfer emphasized, although we believe A.I.D. must recognize that capital and technology are interdependent.

At the same time, our ability to pursue new emphases is limited by real world restrictions. The stress we give to any one of the emphases will vary -- by country and (to some extent) according to the South Asia/Southeast Asia dichotomy. ESF is not inconsistent with these new emphases, but programs in Pakistan and the Philippines will generally be heavier in capital assistance, given their size as well as security considerations.

3. A.I.D.'s Importance in the Region

Judged in sheer money terms A.I.D. is a minor, if still important, donor in most of the Asian countries. It is exceeded in magnitude by the multilateral agencies and often by other bilateral donors.

In 1980, A.I.D. development assistance (DA and PL 480) was less than 10 percent of the total figures in every country of Asia except Sri Lanka, where it was just over 10 percent. Only in Pakistan will we approach major donor status over the next few years.

To some extent this will limit A.I.D. influence in Asia. Our relative importance in the eyes of the recipients doubtless has declined. But financial resources are far from everything. Quality and relevance of assistance are extremely important and we believe that A.I.D. continues to possess major advantanges in high quality technical assistance, innovation and experimentation. Our A.I.D. Missions work from "on the ground" knowledge of economic developments and make day-to-day contacts which help to plan and carry out programs successfully. The Mission presence permits a role in host-country investment planning and in a variety of large and small decisions pertaining to sectors and sub-sectors. It is unlikely, for example, that family planning programs would have been initiated as early and implemented as well in many Asian countries if there had not been a USAID presence. Policy changes in the agriculture sector in Bangladesh, social forestry projects in India, alternative energy programs in many of the countries and recent private sector programs in Indonesia, are made possible

by the presence of an A.I.D. Mission. Our Mission system also gives us the capability to influence other donors -- at consortia meetings, in connection with major MDB negotiatations, and on a variety of policy and operational questions arising from in-country coordination.

4. Resource Assumptions for the Medium Term

Certain assumptions must be made regarding the financial and human resources likely to be available in the future for the strategies discussed in detail in the subsequent sections of this paper.

As to funding, we will argue strongly for some increases in the current levels of Development Assistance during the planning period. At a minimum, small increases to compensate for inflation are necessary. Without any increases, the ability to modify and improve the program will be diminished.

The worst of all worlds would be a requirement to reallocate sums from decreasing DA appropriations to shore-up ESF financed activities. The worldwide trend to increase ESF, while development assistance languishes, has already gone too far. U.S. economic assistance in Asia, whose long-term political and economic meaning to the United States is enormous, is suffering in the worldwide rush to ESF.

Another problem relates to grant funding. We assume the Agency will continue to live with a higher loan floor than it wants. At the same time, most of the activities that form the basis for the Asia Bureau strategy require technical assistance. We would like to place heavier emphasis on loan funded technical assistance and training. But this is a very difficult position to sell to Asian LDC's. Since progress in all the Administration's four areas, i.e., policy dialogue, private sector, institutional development, and technology transfer depends heavily on technical assistance, either the Asian LDCs must accept loan funded technical assistance and training or the Agency must give the Asia Bureau a more equitable share of total grant funds.

As to the PL 480 resource, our assumption is that U.S. farming interests will continue to seek and obtain present and possibly even higher PL 480 appropriation levels in order to market burgeoning U.S. food surpluses.

Staffing and organization will present major problems. We must assume a continued downward trend in A.I.D. direct-hire and foreign national staffing. We must assume no reduction in the project management load -- indeed, we expect the exhortations to improve implementation and management to continue. At the same time, the staffing dynamics of the program envisioned here will require significant changes in staff composition -- a higher proportion of practicing economists, private sector experts and skilled technical officers in areas of particular interest e.g., land and water management, social forestry, and energy.

We assume field offices and Washington will have to resort to a growing and not entirely desirable reliance on contractors, consultants and universities for both short and long-term services. We may also need to consider regional servicing arrangements designed to save manpower by providing more services on a cross-national basis.

STRATEGY FOR THE LOW INCOME COUNTRIES

As presently defined by the World Bank, the Asian low income countries include India, Pakistan, Bangladesh, Sri Lanka, Nepal and Burma. Two of these countries, Nepal and Bangladesh, are considered Least Less Developed Countries (LLDCs). Over the next six years, it would be desirable -- given a more or less constant or moderately increasing overall Asia Bureau allocation of funds (although we will continue to argue for significantly higher levels) -- to begin to reduce somewhat the resource allocations to the countries of Southeast Asia and to increase those of low-income South Asian countries. This would imply a continuation of the shift in resource allocations that has been underway for several years. In FY 1980, the low-income countries received 55.2 percent of the Bureau's DA and ESF resources, while in FY 1982, that percentage had risen to 58.9 percent. The addition of PL 480 to the equation would show a significantly larger bias for the low-income countries.

Basically, we believe it is important to increase A.I.D. levels for South Asia on the grounds that growth in this region has been constrained by shortfalls in foreign capital inflows. The work of Chenery and others makes the case for South Asia in general (and especially for India where savings and export performance has been good) that economic growth would have been significantly higher if economic aid had been allocated on a basis comparable to countries in other regions in the world. The evidence strongly suggests that unavailability of foreign aid has constrained capital growth in South Asia. Moreover, the partial substitution effect which may

occur in some countries between aid and domestic savings does not appear to be a problem in India due to its strong savings performance. We suspect the same is true of other South Asian countries. In other words, foreign aid is not only desperately needed in South Asia, it is exceptionally effective in producing economic growth.

U.S. assistance in the low-income countries will exhibit more continuity than change between now and FY 1988. There will be greater emphasis on policy reform, private enterprise, institution-building, and technology-transfer (the India program will surely have more S&T content in the wake of the Blue Ribbon Team's recommendations and current plans stemming from the recent CDSS review). But the basic areas of assistance are of such fundamental importance -- improved irrigation management, agricultural research and policy reform, health and population -- that we will need to maintain assistance to them. Even rural electrification (which we are phasing-out except for technical assistance in Bangladesh and both capital and technical assistance in Pakistan) will continue to demand technical and managerial attention.

The themes which will dominate our South Asia programs are:

Employment - Since the overwhelming majority of the people in the low-income countries live in rural areas and depend on agriculture for a living, the Bureau's program will continue to emphasize this sector as the basic source of jobs. However, agriculture alone cannot alleviate the serious and growing employment problems of these countries. Thus, in addition to the agriculture focus we will seek increasingly to stimulate off-farm employment. This can include agriculturally related industries of varying size, from small village businesses to medium-scale enterprises having strong employment effects. The very diverse set of projects and ideas now beginning to appear in country plans suggests that this is one of the fastest growing fields for A.I.D. work in Asia, and one on which we need to focus very careful policy and planning attention. We will be reviewing the question of enterprise size from the standpoint of maximizing employment. Complex institutional and policy issues must be confronted as we seek to assist the growth of off-farm employment. We will remain mindful that assistance to off-farm private business must meet the tests of equity and tangible poverty alleviation.

Economic Policy - Economic policies must improve over the next five years if low income South Asian countries are to achieve their full potential. This is underscored in the Economic Performance and Prospects section. These range from macro policies -- devaluation, tariffs, money supply -- to sector policies such as agricultural credit, agricultural inputs, and grain ration systems. In the lower income countries, structural adjustments -- macro and micro -- must be made. Though the MDB's will have the major role in supporting structural adjustments, A.I.D. programs can also help -- by shoring up sectoral reforms and by relieving balance of payment constraints (e.g. the Bangladesh Rural Finance Project and the Pakistan Agriculture Inputs loan). Also as an aspect of policy reform, the Bureau will emphasize and expand its efforts to involve the private sector more closely in the development process.

Institutions - Generally, the low income countries are weak in their institutional development. The Bureau will continue to strengthen government institutions where appropriate (e.g. agricultural research) but increasingly search for means by which it can support private institutions such as economic research organizations, cooperatives, business groups, PVO's and community level management groups and institutions. Improving land and water management in the subcontinent is a good example of what we hope to deliver in terms of quality and institutional relevance over the next five years. Another example is the creation of new intermediary institutions and mechanisms to stimulate private enterprise development.

Transfer of technology goes hand-in-hand with institutional development. In agriculture, emphasis will be on research dealing with seed improvement, appropriate water management systems, rainfed agriculture, and the development of alternative energy resources. In health, the Bureau will continue to work on rural primary care but will also fund research on medical problems of the rural poor, e.g. respiratory diseases.

Institutional development will be pursued in both public and private sectors and in university and research settings. Another important arena of institutional development is the rural community, where successful local organizations can make the difference between effective and ineffective development investment. Especially in the poor countries of South Asia, we see efforts to improve community management as vitally important to the success of virtually all our rural development programs.

PL 480 Integration - To the extent that assistance to the low income countries in the agriculture, population and health sectors is successful, PL 480 Titles I and II should decline gradually. PL 480 objectives will be more firmly integrated into DA program objectives and where possible Title I/III will be tied closely into agriculture sector policy reforms. The Pakistan Title I support for agriculture development efforts in oilseeds production is a recent example of such integration. Title II programs will be directed more to priority recipients, primarily the very young, with an educational component as an essential element. School feeding will be phased out in most cases.

Training and Education - Greater emphasis will be placed on training for managerial and technical jobs in the private sector. Firm educational foundations must be established that will permit low-income countries to replace U.S. technical assistance with there own cadres of trained people. The local private sector must be assured that it can obtain the managerial and technical expertise to expand production and/or move into new productive activities. These training programs should be included in the various sector programs. In addition, we will look for ways to improve the quantity and quality of female education.

PVO's

Asia programs will support PVO activities, generally funded under the Bureau's distinctive 'co-financing' arrangement, in most countries and in virtually every sector of A.I.D. assistance. Perhaps the most active sector of activity in the South Asian countries will be population. The Bangladesh Mission, for example, will commit a significant portion of its population budget to PVO's for funding family planning in Bangladesh each year.

STRATEGY FOR THE MORE RAPIDLY PROGRESSING COUNTRIES

Three A.I.D. country programs and two regional programs are covered under this heading. The country programs are Indonesia, Thailand and the Philippines; the regional programs are the South Pacific and ASEAN. The focus of the following discussion is on the three country programs.

Country Programs

In Southeast Asia, especially Thailand and the Philippines, poverty is increasingly perceived as a regional or lagging-area problem, rather than one of national dimensions. Basic capacity exists for

these countries to continue their rapid economic growth of the 1970s. The foundations for self-sustaining development are in place. Both the Asian Development Bank and the IBRD have recongized the arrival of the Philippines, Thailand and Indonesia at a new income status by graduating them from their most concessional financial terms.

Limited Asia Bureau appropriations and personnel resources, coupled with the relatively labor-intensive nature of the Administration's basic themes, will require some reordering of program and staff resources. We will need to begin moving some of these resources, especially staff, from countries that in the next five to ten years are likely to have fully established themselves in the ranks of middle income countries and to use these resources to carry out South Asia programs that inevitably will be more management intensive.

The Southeast Asian group should be expected to graduate from the traditionally organized and conceived DA programs. The question is the nature of the transition and how to accomplish it.

Our current view is that these programs will concentrate increasingly on activities where the U.S. has a unique technical, economic, or commercial expertise or interest and where the host country has demonstrated a strong interest in obtaining U.S. technical assistance to further its own development objectives.

The programs will facilitate long-term relationships between U.S. and Southeast Asian institutions in both the private and public sectors. We would hope that these countries will be prepared to borrow A.I.D. funds to facilitate these long-term institutional and scientific relationships. In turn, A.I.D. should be prepared to "cut loose" implementation responsibilitity to the maximum extent possible, utilizing U.S. private contractors and host country institutions to manage programs. One could envision multi-year science and technology agreements, with total phase-out of development assistance possible in some cases by the end of this decade. Mission staff would decline markedly over time.

These new-look programs would also be concerned with policy. Joint research efforts in management, economics and the social sciences could be the vehicle for a more sophisticated "dialogue" with less USG involvement.

To summarize, these programs would stress: (1) policy formulation; (2) improving capability of scientific and technological institutions; (3) increasing research efforts; and (4) transfer of technology through increased U.S. and host country private activity. In each of the above areas, training of managerial and technical personnel would be an important part of the program.

Though program content would shift away from capital investment in lagging geographic areas, the concern with poverty would remain in the policy area, in the institutional linkages created, and (indirectly) through the potential of these societies to outgrow their own poverty through technical and economic progress. A new concern for the urban poor and dealing with urban development problems could be an attractive, though likely still minor, part of the A.I.D. effort in these rapidly advancing countries.

The PL 480 programs in these low-middle income countries should be phased out by 1988. Even now the justification for Titles I and II is wearing thin in economic terms.

PVO 'co-financing' programs would continue in the rapidly progressing countries of Southeast Asia, though funding levels may decline gradually as the overall A.I.D. program undergoes the kind of transformation just described. It would be anomalous, we believe, for PVO funding to remain constant or growing while other DA activities were becoming more focussed, and perhaps, diminishing in overall funding levels.

How fast can such a transition occur? This will vary by country. In Indonesia, with its weak institutional base, we will be carrying out a fairly broad-gauged development program for several years. The basic task of building institutions, training people, and demonstrating workable approaches to rural development is by no means finished. The Philippines, too, will need time to manage the transition. We must continue support for certain rural investments in agriculture and off-farm production as well as in health and population programs even as we introduce elements of greater technical and scientific sophistication. Thus, in both Indonesia and the Philippines we will need to retain for some time an interest in 'community management' issues at the local level in rural areas. The Thailand program, however, possibly can be transformed more rapidly, -- less rural development financing in northeast Thailand and more financing of technical and scientific activities.

Regional Programs

The Asia Regional program would continue to provide assistance to regional institutions that promote technical cooperation between the U.S. and A.I.D. assisted countries in the region as well as countries where A.I.D. has phased out. These institutions may be existing U.S. and Asian entities with commercial, cultural or scientific and technological objectives. Support would continue for the ASEAN program at present or possibly somewhat increased levels.

The South Pacific would remain a small program with limited objectives. The current mode of project assistance -- a mix of PVO, Peace Corps, and regional institutions -- has appeared generally well suited to the problem of working with ten small island nations with diverse demographic, geographic and economic characteristics. We intend, however, to explore the desirability of concentrating our assistance in fewer subject areas.

DEVELOPMENT GOALS IN MAJOR SECTORS

A. In agriculture, we will concentrate on the goal of increasing the output of basic foods to permit a substantial improvement in the diets and incomes of poor people through the two major thrusts of irrigation and agricultural research and production projects. We expect these projects to contribute significantly to a 3 to 4 percent annual increase in food grain production across the region.

1. Irrigation and Water Management

Almost three-fourths (75 percent) of the projected increase is expected to come from irrigated areas, both through expansion and improvement in irrigation. Irrigated area can be expanded both by developing new water sources and by using water more efficiently on lands now supplied. The target for the latter approach is to raise irrigation efficiency from the current level of about 30 percent, by 5 to 7 percentage points. We regard this as a challenging but realistic goal which will require management improvements both at the farm level and in main system operations.

To ilustrate the above projections, Bureau projects will contribute toward the following outputs. A.I.D. projects will affect directly, 321,000 hectares of India's 61.5 million hectares of irrigated land. We expect, however,

that A.I.D. projects will influence policies that will be far reaching in their effect. In addition, through A.I.D. projects alone, we expect that approximately 22,000 farmers and professionals in India will receive training in improved water management technologies and techniques. Pakistan's projects will affect about 30 percent of the 350,000 hectare Indus River basin, including training of some 6,000 farmers and professional technicans. Sri Lanka projects will contribute to the improvement of some 54,000 hectares of irrigated area and train about 500 professional and semi-professional technicans.

To support and sustain improvements of the type outlined above, irrigation institutions must be strengthened, and this will require more than just training. Changes are also required in policies, professional incentive climates, organizational structures, and linkages among host country organizations.

Thus, in addition to the number of people trained, other indicators of progress must be assessed. We expect to play a major role in:

a. Creation of self-sustaining research and training capacity both within and outside government irrigation agencies.

b. Policy changes which mandate that alternative future O&M policies be developed and considered during system design and that farmers be used as a source of local topographic and socio-organizational information during system design.

c. Irrigation department policy changes that create new and stronger incentives for effective operation and maintenance including, where appropriate, the creation of a separate career track for O&M specialists.

d. Irrigation department policy changes that give more weight in evaluating system and personnel performance to the levels of agricultural output achieved in respective areas of responsibility.

e. The creation of viable irrigators' associations that can allocate water among members in such a way that head/tail yield differences are minimized to the greatest extent possible. The associations will be able to request and obtain meetings with irrigation authorities, and gain redress for their problems and complaints.

2. National Agricultural Research, Extension and Education Systems.

The goal is to support and build Asian capacity to sustain agricultural production growth at a 3-4 percent increase per annum. Continued strengthening and expansion of the knowledge and technology base within the above systems must be supported. Investments in improved capacities for conducting agricultural research in recipient countries are designed to provide production and yield increases. Presently these countries spend about one-half as much of their agricultural GDP on research as do developed countries. It is projected that by 1988, research and extension expenditures will be only 1.25 percent or less of agricultural Gross Domestic Product (GDP) in Asia. To strengthen the national research organizations of the developing Asian countries, an investment of at least 2 percent of the agricultural GDP for recurrent and capital requirements is necessary.

By 1988, we expect to commit over $250 million in project funds to facilitate and strengthen these processes. Some examples:

The Pakistan Research, Education, and Extension project by 1988 is designed to add approximately 785 B.Sc. graduates and 200 M.Sc. graduates to the national system; retrain approximately 1,000 extension workers; and expand the number of trained technicans in the agricultural research system by 40 percent this will have a significant impact on the traditional commodities (i.e., rice and wheat) and the newer technologies generated for oilseeds, fruits, and vegetables.

The Bangladesh Agricultural Research project by 1982 will: train approximately 1,900 agricultural staff members to address water management practices and techniques, farming systems research, and post harvest research; and train approximately 400 scientists in rice production techniques and cultural practices and 1,200 extension workers in improved production practices.

The Indonesia Applied Agriculture Research project ($25 million) is building or improving facilities for four research institutes and thirteen research stations in the outer islands which will be fully operational by 1988. Pioneering new research will be underway in such specific concerns as tropical forestry, tuber crops, deep water rice, fish, and livestock. The goal of the Indonesian Government is to institute and incorporate these expanded elements into its overall research commitment in agriculture. Indonesian allocations to research are accelerating at approximately 10 percent per year.

In addition, we will continue to help develop policy research institutions in a number of Asian countries, and working with Asian scientific and policy makers to develop new concepts of development priorities in rainfed agriculture.

B. In the Health, Nutrition and Population Sectors our goals are:

1. In health, all of the countries of Asia have established their own goals of reducing infant and young child mortality. Our own analysis suggests that a regional average infant mortality rate (IMR) of 50-60 per thousand by the year 2000 is a reasonable target. The current regional average is somewhere in the neighborhood of 110 per thousand. In South Asia, IMRs are upwards of 120-180 per thousand. In Southeast Asia, they are all below 100 per thousand, with Thailand and the Philippines well under 80 per thousand. Selective primary health care will assist the Asia countries to meet the regional goals. To reach these goals the following targets can be postulated for 1988.

   - 25 percent of children 0-6 immunized for diphtheria, tetanus, and pertusus;
   - 20 percent of mothers immunized against neonatal tetanus;
   - 25 percent of the eligible population surveyed for malnutrition and receiving advice and counselling;
   - 20 percent of the at risk population having access to oral rehydration therapy; and,

- 25 percent of the at risk population protected by programs of source reduction and prophylaxis for malaria.

2. In the population sector, the overall goal of lowering the crude birth rate (CBR) to 25/1000 population has been selected as a reasonable and achievable target, for the nine countries comprising the Asia region, by the year 2000. All of the countries in the region except Burma have policies and family planning programs working to reduce fertility to levels commensurate with economic development. (Though Burma has not officially opted for a population program, there are recent indications that family planning as an integral component of a family counseling service may begin to be actively implemented.) In the interim period of this strategy (by 1988), what is required is the expansion of family planning services to attain 33 percent of couples effectively protected against unwanted pregnancies.

3. A.I.D. projects are expected to contribute directly to the achievement of these goals in every country in which we work in Asia. The ways in which they contribute will vary from country to country, depending on the type of project and the role of other donors, but the extensiveness of donor involvement, including A.I.D. involvement, makes both the short-term service objectives and the longer term mortality and CBR reduction objective feasible.

   For this strategy plan period A.I.D. projects -- such as those in immunization and nutritional surveillance and education in Indonesia, oral rehydration in Bangladesh, malaria control in Pakistan and population planning in Thailand -- will have the greatest impact on infant and young child mortality and the reduction of the birth rate through the provision of these services.

C. Energy and Natural Resources

The basic A.I.D. goal is to contribute to the development of policies and institutional capacities necessary to realize a 6 percent annual increase in commercial energy production and a 2.5 percent annual increase in non-commercial production.

The A.I.D. Asia countries will require much higher levels of commercial energy to sustain acceptable rates of economic growth. Demand is projected to increase from 165.8 million tons of oil equivalent (mmtoe) in 1978 to 198.2 mmtoe in 1983 and 273.1 mmtoe in 1988. The overall average annual rate of growth from 1983-88 is 6.6 percent. If a conservative energy/GDP ratio of 1.32 is used, this level of commercial energy consumption will be necessary to support an overall 5 percent average annual growth of GDP. The capital needed to provide these supplies is large. The ADB estimates that to supply projected energy needs in A.I.D. Asia countries (except India) between 1985 and 1990 will require about $70 billion in investment (including $50 billion in foreign exchange).

While commercial energy is vital for economic growth, the poor populations in Asia will continue to rely on biomass fuels (wood, agricultural residues, and dung) for cooking and heating. In 1978, non-commercial energy from biomass constituted an estimated 54 percent of total energy consumption in A.I.D. Asia countries and exceeded commercial energy use in Sri Lanka, Burma, Pakistan, India, Bangladesh and Nepal. Assuming a 2.5 percent overall growth per annum in demand, in line with population increases, demand for these fuels will increase from 191.6 mmtoe in 1978 to 216.8 mmtoe in 1983 to 245.3 in 1988. Non-commercial fuels would still account for 47 percent of total energy consumption in 1988.

The top priority of the Asia strategy in this sector is to increase production of wood and biomass and to improve the efficiency of its utilization. The ADB estimates foreign exchange requirements in the biomass energy area of $480 million, excluding India, for the period 1985-1990. If we add $1 billion for India, the total is $1.48 billion over 1985-1990. With an A.I.D. Asia allocation of $50 million per year for biomass projects, we would provide a significant percent of the total estimated foreign exchange requirement. By 1988, A.I.D. would demonstrate the economic viability of at least three woodfired power plants, several hundred gasifiers, a 325KW rice husk steam unit, and improved charcoal production systems.

A second priority area is coal, which is playing an increasingly important role in reducing dependence on imported oil. Except possibly for Pakistan, the emphasis will be on technical assistance and training, with the main programs in India, Indonesia, the Philippines, and Thailand. Two coal briquetting

plants would be built, one in Pakistan and one in Indonesia to demonstrate the economic and social feasibility of coal briquettes as substitutes for fuelwood and kerosene. Finally, solar photovoltaic technology may become commercially viable for widespread application by 1990 especially for distributed applications (e.g. rural villages off the grid). A.I.D.'s programs will help identify and promote applications for photovoltaics so that private investment needed to bring down costs to $2 per peak watt in 1990 may be achieved.

D. Forestry

The A.I.D. goals between 1983-1988 to address the fuelwood deficit situation are the creation of additional forest resources, improving the mangement and distribution of fuelwood through training and extension, and fuelwood species research.

The average annual rate of deforestation of closed forest for the Asia region is 0.6 percent. By the year 2000 if this rate continues, the projected depletion of closed forest will be 12 percent. During the last decade, the recorded removals of roundwood for the Asia region registered at an annual rate close to 3 percent which is well above the world average. Fuelwood and charcoal constitute the bulk of the removals at 88 percent of the total roundwood removed in 1980.

The future supply situation is best analyzed in terms of emerging scarcities. Acute scarcity situations are foreseen in mountainous areas of South Asia and in the major urban areas of the region. Deficit situations will occur mainly in the Indogangetic plains of the Indian subcontinent, central Thailand, and Java in Indonesia.

The A.I.D. Asia countries will need to increase by a factor of 3 the number of hectares required to meet fuelwood requirements projected for the year 2000. Current fuelwood use in South Asia and Southeast Asia is 162 million cubic meters (m^3) and 183 m^3 respectively. Projected fuelwood demand for the year 2000 is 317 m^3 for South Asia and 290 m^3 for Southeast Asia. New plantings required to mee this target are in South Asia 740,000 hectares per year, and for Southeast Asia, 285,000 hectares per year.

A.I.D. projects in India, the Philippines, Sri Lanka and Pakistan will contribute between 10-17 percent of the projected planting target requirements to satisfy fuelwood demands between 1983-88. Specifically in the Madhya Pradesh Social Forestry project, the operational component will result in 65,000 hectares planted on degraded lands and is expected to supply 25 percent of the annual fuelwood requirement for 5,000 villages in the project area.

Forest Research

The potential incremental value to be achieved at this stage in forestry research in improved yields is comparable to the take off stage in the green revolution in wheat and rice. Between 1985-2000, A.I.D. supported research on vegetative propagation, genetic improvements, biomass plantation establishment experiments, and analysis of short-rotation fast-growing nitrogen fixing trees on marginal lands could almost double yields/ha/year from the current average yields of 30 m^3/ha/year to 50 m^3/ha/year. Rural forestry projects in the Philippines, India, and Sri Lanka have research components which could demonstrate the economic importance of research in the fast growing species with the doubling of future yields. The Asia Bureau in cooperation with S&T is designing a joint project to support a forestry and fuelwood research network in Asia. This effort will include biological, social and management components.

Policy and Institutional Reform

Currently the forestry allocation of national budgets in the A.I.D. Asian countries is woefully low, ranging from .6 percent of Pakistan's national budget to approximately 1 percent of the Indian national budget. A.I.D. projects in the Philippines, India, and Pakistan have operational and planning components which are stimulating national governments to reassess their forestry allocations. By the year 2000, A.I.D. supported countries should have annual forestry budgets between 2-5 percent of the national budget.

Comparisons between actual and projected forestry manpower requirements for the period 1985-2000 suggest a doubling in numbers. Given the current forestry manpower deficit, (forestry departments are approximately 50 percent understaffed) and the limited training capacity in the Asian region, an alternative solution to skilled and unskilled labor requirements for rural

forestry development is essential. A.I.D. social forestry projects in India and the rainfed project in the Philippines have addressed this issue by establishing 75 percent of the labor for planting and maintaining trees as the responsibility of schools, PVOs, farmers, and Panchayat members. Essentially, we will push for all the local-level forestry to become a privately, rather than a state managed subject.

E. Education and Human Resources

The education and human resource goals for the next five years are limited and specific, as are the program activities currently envisioned and described in the following sectoral discussion. They include:

In a limited number of countries, we will help to improve the policy and planning units of national education systems. The objective is to strengthen staffs, primarily in economics, statistics, and management, in order to improve the internal efficiency and productivity of the national systems. For example, in Indonesia, by 1988 through training 30-40 specialists, providing a limited amount of technical assistance, and computer hardware and training, we will have helped the Indonesians to deploy an expanded and improved system of analysis to guide the extremely large new investments in education currently contemplated by the government.

In a limited number of countries where suitable opportunities exist, we will fund experimental projects designed to improve access to and the quality of female education and vocational training.

In our training programs generally, we will attempt to increase the percentage of participation by private individuals.

As is apparent in the sectoral discussion which follows, we have no intention of undertaking major sectoral improvement programs. The Asian education systems are vast, extremely conservative in outlook and management, and in most cases not very efficient. In the South Asian countries, with the exception of Sri Lanka, participation rates, particularly for girls, are low and dropout rates very high. The Southeast Asian nations do much better in these regards, but their systems have serious qualitative deficiencies. Throughout Asia, simply keeping pace with the increasing physical demands laid on the systems by population growth is about the best most governments can do.

In these circumstances, the Bureau believes that limited, carefully directed interventions that may have some overall effect on policy are most suitable. We are among only a very few donors looking with interest at private alternatives to public systems e.g., the possibilities for improved female education in Islamic countries, and privately supported management education.

Education and training as project components (not as sector activities), remain centrally important, of course, education to our work in all sectors.

SECTORAL AND SUB-SECTORAL STRATEGIES

In the earlier sections we describe Asian development realities according to a South Asia-Southeast Asia dichotomy and a more complex (social/ institutional) categorization resulting in three sets of recipient countries. We have described briefly some operational implications of the first and touched on certain implications of the second, such as the need to continue a broader program in Indonesia. In dicussing sectors of assistance, at times we must differentiate strategy in South vs. Southeast Asia, for example, in the important area of irrigation and water management. At other times -- in discussing health, for instance -- we will find the three group model to be operationally more useful. Sometimes the great diversity of Asia will defy any generalization and we must describe strategies on an essentially country-by-country basis.

AGRICULTURE

Three main approaches are open to developing agricultural production potential in Asia:

-- more intensive use of existing cultivated land (vertical expansion) through improved technology (high yielding variety/ fertilizer packages), and measures to alleviate physical constraints, such as rehabilitation of run-down irrigation systems, drainage, desalinization, terracing, and soil and water conservation;

-- expansion of the net irrigated area which would permit more intensive and flexible land use and would increase and stabilize yields. By facilitating multiple cropping, this also adds to the gross arable land; and

-- horizontal expansion of the net arable area under rainfed conditions. In most cases, this will involve transfer of land from other agricultural uses (e.g., grazing). Historically, this has been the most common means of increasing food production.

While some argue that considerable amounts of rainfed land can be brought into cultivation at relatively low cost, opinion on this point is mixed. The difficulties and costs of expanding cultivated areas, at least in Asia, may be substantially underestimated. Successful use of under- utilized land without environmental damage will require enlightened planning, social policies, and research. The opportunities for raising productivity on existing farms are considerably greater, and as much as 75 percent of the gains in production over the remainder of the century will stem from this source.

Asian countries can choose among their options to some extent, though the range of choice is constrained by resource endowments. To an increasing extent, however, population pressure on land resources is reducing flexi- bility in horizontal expansion and forcing countries in the Asia region toward vertical expansion.

Our agricultural strategy will concentrate on five basic subsectors:

a) irrigation, particularly water management, training, and "software" (on-farm water and community management). Thirty percent of the Bureau's budget is in this area, and this percentage will go somewhat higher by FY 1988;

b) strengthening of national agricultural research, extension, and education systems;

c) food policy and agricultural sector analysis relevant to food production, food security, and equitable economic growth;

d) rainfed resources management, including upland and secondary crops as well as agro-forestry and watersheds; and

e) agribusiness and small to mediur enterprises providing off-farm employment.

Projects in agriculture and rural development will use the following means to achieve their objectives in ways that are compatible with host country goals and priorities:

a) improvements in country agricultural policies;

b) strengthening of human resources and institutional capacities with special emphasis on the development and application of relevant technologies;

c) expanding the role of development countries' private sectors;

d) regional assistance networks (e.g., those keyed to the inter- national agriculture research centers); and

e) limited assistance to public sector institutions, including those of local governments, which are essential to rural progress.

In the broadest sense, the most fruitful role of the Bureau in accomplishing these objectives is to concentrate its efforts to facilitate human and institutional resource development. This role is a function both of the comparative advantage of the U.S. in agriculture and what seems to be an appropriate division of labor among the donor agencies.

The private sector will be the basis for much of what we do in terms of policy reform, agribusiness, and rural enterprise, although it will figure importantly in the other subsectors as well.

Narcotics-related Agriculture Development Activities

Substantial effort will be required to shape a series of development investments which, when coupled with adequate enforcement by the host government, can diminish illicit narcotics production. Pakistan is the main case in point, although we will be working also in Thailand and possibly Burma.

Areas of Declining Interest

Asia Missions have generally concluded that they will not undertake new projects which attempt to integrate a wide variety of public services within an area development framework. The current approach is more selective, focusing on irrigation, natural resources, and institutional problems separately. Although there is rarely one public or private sector intervention which can, by itself, overcome serious development constraints, there is a definite need to choose the fewest possible interventions due to recurrent cost and human resource problems in recipient countries. The area development concept will probably live on, however, in narcotics-related development activities, where the idea is to introduce multiple development benefits to a narcotics growing area.

Subsector: Irrigation and Water Management

Agriculture in Asia is heavily dependent on irrigation. Although a variety of crops are grown on irrigated land in Asia, the foodgrains and, in particular, rice are by far the most important. Almost three-quarters of the foodgrain consumed in Asia is rice. Most authorities agree that rice production must grow by about 3 percent a year over the foreseeable future to meet rising demand.

There is also widespread agreement that the lack of controlled water supplies constitutes the most serious constraint to higher rice production. Problems range from the absence of an irrigation system, to flooding problems caused by over-irrigation and poor draining facilities. Rice yields can range from less than 1 ton per hectare in upland rice areas to as much as 9 tons on irrigated, high-input experimental farms. In most areas, some form of irrigation is necessary to achieve yields in the 2 to 5 ton/ha. range. In the dry season, irrigation is essential.

New system construction will continue to be important in a number of countries in the region. India, starting from a very large base, plans to double the area under irrigation by the end of the century. In Sri Lanka, the ambitious Mahaweli scheme (currently underway) will cover 364,225 hectares -- more than 242,817 hectares of which are currently rainfed. Indonesia plans new construction covering more than 2 million hectares during the coming 5-year plan. The bulk of this work will be funded by MDB's (multilateral development banks) and by the countries themselves. A.I.D.'s comparative advantage, with its relatively limited ability to finance capital inputs, clearly does not lie in this realm.

In other countries, improvement of existing systems is the dominant theme. Pakistan is embarking on a massive effort to rehabilitate the enormous century-old Indus basin system. In the Philippines, an important effort to improve the management of existing sytems is underway. And, in Indonesia, more than 1 million hectares of existing irrigation will be rehabilitated or improved during the next 5-year plan.

Improving the ability of irrigation systems to control water effectively is critically important in keeping Asian food supplies in balance with the demand. In most Asian countries, institutions charged with this responsibility cannot discharge it effectively. Through its ability to access high quality technical and managerial expertise, A.I.D. can make a major contribution to building this institutional capability.

Irrigation development can be thought of as consisting of three basic stages. The first, dominated by civil engineering disciplines, comprises the capture and conveyance of water to cultivable land. Problems are seen in technical terms and little attention is given to the productive end of the system. The second stage is reached as obvious sites for water capture are exploited and the need to increase production on existing systems is felt, often occasioned by building population pressures. Here concern shifts to the delivery of water within the system and the allocation among its parts and to the increased use of other agricultural inputs. Finally, in order to raise efficiency further and to provide adequate funds and labor for regular maintenance, it becomes apparent that farmers' interests must become more central and farmers' groups organized and involved in system operation and maintenance. The latter is what we refer to as "community management".

A.I.D. assistance can be most effective in stages two and three of this model: developing the institutional capacity to implement improved systems of water management and facilitating greater farmer participation in system design, construction, and management. Particularly in South Asia, involvement in these aspects of the irrigation subsector will be the dominant area of assistance for the next five to ten years.

In some countries, such as Burma and Thailand, where pressure on irrigated agriculture is minimal, there may be little incentive to work extensively in these areas. In other countries, even though major construction of new systems is underway, pressures on food supplies dictate a simultaneous effort to improve sytem management and to involve farmers intimately in rehabilitation and O&M activities. Innovative work of this type is currently underway in both Sri Lanka and Indonesia under A.I.D. sponsorship, and opportunities in other countries should be explored.

The Philippines is also well advanced in these two areas and has served as a model for other countries in this regard. The Philippines, however, already has a fairly well developed institutional capacity to sustain such change on its own. We need to remain in close contact with this work through collaborative research and monitoring activities so that experience developed there can guide and support similar activities elsewhere in the region.

India, always on the margin of food security, is moving rapidly to develop improved irrigation management capabilities. Bangladesh,

with almost no supportive institutional infrastructure, stands in need of a large expansion in irrigated area. Because of the heavy reliance on tubewells for this expansion, however, questions of joint farmer ownership, operation, and maintenance must be addressed at the outset.

Addressing rural social or economic problems, such as those found in the "downstream" aspects of irrigation, inevitably involves the actions of government at the local level. In many countries, over centralized government structures and weak local institutions inhibit progress in irrigaion and other areas. A.I.D. will retain its concern for the improvement of local government functions, if necessary to the success of various rural investment programs, and will intensify its efforts to increase private participation in planning, operation and management.

Subsector: Agricultural Research, Education and Extension

Agricultural research, education, and extension have long been at the heart of the Bureau's agricultural sector strategy. This prominence is based on the following widely accepted points:

1. The major source of improvement in the efficiency of agricultural production, in output per unit of input, and in total productivity must be technical change. This change derives primarily from research leading to new technology.

2. Investments made in agricultural research and in the extension of new technology (to farmers) have been highly productive when compared to almost any other investment available to either the public or the private sector.

3. The generation (and supply) of qualified professional agriculturalists has not kept pace with sector needs, and serious deficiencies exist in many Asian countries that must be corrected in order to forge a comprehensive system to generate and disseminate agricultural technology.

The Asia Bureau is concerned both with improving the level of knowledge and technology that are locally applicable and applying those technologies. While research, education, and extension are all important components of the overall system, A.I.D.'s comparative advantage lies more with the first two areas than with the third. This emphasis fits well with the World Bank's heavy emphasis on strengthening national extension services through the Training and Visitation system.

Priority concerns are the following:

1. Management systems for sustained, high productivity in relatively favorable natural resource areas, with particular emphasis on irrigated agriculture;

2. Management systems for sustained production in less favorable natural resource areas;

3. Crop anbd animal protection (pre- and post-harvest) by the most cost effective and environmentally acceptable means; and

4. Food and agricultural policy related to food self-reliance, food security, and equitable growth.

Agriculture research strategy tends to follow the country categorization outlined with respect to social/institutional levels of achievement, rather than the South Asia/Southeast Asia dichotomy.

In countries where the conventional research, extension, and education systems are reasonably well developed and food security in basic commodities is not a pressing concern, the opportunity exists to increase emphasis on less favorable natural resource areas while continuing to address second generation problems following in the wake of "Green Revolution" technology.

Indian systems, for example, are perhaps some of the most sophisticated in the less developed world despite problems inherent in the Indian federal system. A.I.D. resources can assist India in addressing such second generation concerns as water resource systems analysis and developing multi-disciplinary analytical tools in irrigation management and in the areas of post-harvest technology and alternative food crops.

In the Philippines, the system is characterized by a limited number of centers with substantial strength and productivity interlocked with a much larger number of weaker and less productive institutions. Expanded utilization of the farming systems approach to strengthen linkages among research, extension, and client groups and extend research into problems of rainfed agriculture and areas of serious environmental degradation are already underway. Thailand, Sri Lanka, and Indonesia (less so) are also representative of Asian countries where basic agricultural institutions are moderately well advanced. They, like India and the Philippines, are tailor made for exploiting the common themes approach to development, based not only on the level and quality of the institutions in place but also on a number of cross-cutting concerns related to irrigation, agro-forestry, and natural resource management. This process is underway.

In countries within the region where institutional infrastructure and capabilities are less advanced or are operating within a more constrained environment, a different approach is necessary. Basic research skills must first be strengthened and linkages between research and the farmer established to insure the relevance of the technology being developed. During this phase, the research focus will probably be on the production of basic food grain commodities in relatively favorable environments. In Bangladesh, for example, the linkages between research and extension remain tenuous, and the relationship to the agricultural university network is practically non-existent. Pakistan, Nepal, and Burma also have serious deficiencies in their institutional structures and in their professional manpower bases.

Subsector: Food and Agricultural Policy

During the foreseeable future, food and agriculture policy will remain central to strategies for economic development, and become even more crucial to the well-being of the poor as well as more complex. In Asia, the demand for food will probably grow faster than most countries can produce it because of population pressures and increasing incomes. Increases demand, the application of new technologies, commercialization of food production, and raises food imports will cause both food prices and policies to become increasingly difficult to rationalize.

To meet this growing concern, A.I.D. intends to assist Asian countries to strengthen their policy research institutions in order to be able to evaluate alternative instruments and policies. Areas where A.I.D. can be most useful in helping to develop stable food and agriculture policies are:

1. Economically realistic pricing in the agriculture sector -- in terms of farm output and credit policy concerning farm inputs.

2. Public policies investment which encourage research, technology transfer and adaptation, and basic services to farmers.

3. Access and use of resources for production, employment, and consumption in rural areas.

    a. Analysis of particular economic and social groups (e.g., women, landless and near-landless labor, and households with limited resources) with regard to their access to the inputs needed to take advantage of their available resources.

b. Analysis of access to education and training to assure full use of productive potential in rural areas.

In addition to these types of assistance, the Bureau will support policy reform through analysis, dialogue and persuasion, linked to projects and other types of assistance (sector loans, PL 480 Titles I and III).

Sub-sector: Rainfed Agriculture

Although far less productive than the irrigated areas, between two-thirds and three-quarters of the arable land in the Asia region is rainfed. Cultural practices employed on these areas are more traditional and input use substantially lower than on irrigated areas. Traditional crop varieties, including tree crops, are grown on these marginal lands where the limiting factors to productivity are poor soil fertility and seasonally limited rainfall.

Potential motives for working in this area are: (a) to improve rural incomes of particularly poor parts of the population and nutritional standards, (b) to reduce the rate of environmental degradation caused by the use of inappropriate agricultural practices on fragile lands, and (c) to redress imbalances between irrigated and non-irrigated areas.

Underlying the introduction of any package of improved husbandry practices is the requirement that the technology be significantly more profitable than that currently employed and that it not appreciably increase the risk exposure of the small farmers who adopt it. We would do no service by promoting practices and techniques that cannot be sustained once special project-related incentives are withdrawn.

One major constraint to a viable rainfed strategy is the absence of a range of technologies, adapted to particular climatic, soil, and socio- cultural situations. Underlying this absence is the limited ability of national research systems to develop such techniques or to adapt to local conditions those techniques developed elsewhere.

Research already done has concentrated on development of agronomic techniques which work under careful, controlled management. Very little attention has been given to the equally important problem of adapting practices to local socio-economic and cultural conditions or to effective techniques for introducing and sustaining the new practices.

At the present time, assistance to rainfed agriculture in most countries is most appropriately restricted to developing national research capacity to carry out these technology generation and adaptation tasks. Such research must have a strong "action research" character, where experiments are conducted in farmer's fields and where technologies developed are subsequently introduced without artificial incentives and the results carefully monitored and evaluated.

In this context, on-farm tree crop management which has in traditional rain-fed farming systems satisfied important subsistence needs for fuelwood, fodder, fruit, construction materials, and some cash income (e.g., cloves and mulberry for silk production) must be incorporated into research programs. Tree crops have contributed to the maintenance of soil fertility through their nitrogen fixing capabilities and have often prevented serious watershed degradation and disastrous flooding and soil erosion through their soil binding characteristics. Within rainfed agriculture, the Asia Bureau will place increased emphasis on applied research in indigenous species with particular emphasis on nitrogen fixing trees for fuelwood and fodder production.

Thus, the Bureau's strategy in this new area of interest, while still far from satisfactorily defined, will be to stress agricultural and socio- economic research. We are not ready in most countries to identify the most relevant capital investments, though our strategy will, over time, include such investments as we become more confident of our research conclusions. The exception here is in the area of forestry investments where we already believe that a series of appropriate development interventions has been identified.

Subsector: Non-Farm Enterprises

A major new area of emphasis for the Bureau will be private non-farm enterprises. In the Asian region, as elsewhere in the world, the major countries are committed to development programs that will transform them from traditional agricultural to modern industrialized societies.

For nearly a decade, we have ignored non-farm enterprise. In the late 1970s, a few A.I.D. Missions returned to non-farm enterprise development because of a concern with growing unemployment problems. Exceedingly large numbers of new labor force entrants and substantial underutilization of existing labor force, it was found, had made expansion of productive employment opportunities an important development objective in the Asia region. Absorption of

new entrants alone, leaving aside jobs for the backlog of unemployed and underemployed, would require on the order of 260 million new jobs by the year 2000, an increase on the order of 60 percent, in the countries in which A.I.D. now has programs. Further, non-farm enterprise development was an important element of strategies for increasing employment oppor- tunities of host country governments. In Indonesia and the Philippines, in particular, Mission analyses concluded that expansion of small and medium scale non-farm enterprise was critical not only to structural transformation, but also to dealing with the employment problem. Over the past two years, Missions have been encouraged to develop non-farm enterprise projects by as a means of expanding employment opportunities for the increasing numbers of landless unemployed, promoting the private sector, transferring technology and contributing to economic growth of host countries in the region. At present, twelve new non-farm enterprise projects, i.e., with FY 82, FY 83 or FY 84 initial obligation dates, have been started, approved or planned. Their life-of-project costs total approximately $140 million. This contrasts with the FY 76 - FY 81 period when only five non-farm enterprise projects with a life-of-project funding of about $16 million were undertaken.

The content of these early projects is extremely diverse. Projects include components that will assist in provision of credit, training, equipment, feasibility studies, policy analysis, and direct technical assistance to enterprises ranging from bookkeeping and mar- keting to executing joint ventures. The approaches also vary widely -- projects are defined by product line (e.g., edible oils), industry (e.g., metal products, food processing), function, (e.g., training, finance), scale of enterprise (medium, small, micro), and location of enterprise (rural, urban). The diversity of approach and content is to be expected in the early stages of program development.

A major objective in the next few years will be to narrow the program through adoption of common themes across the region that will help to focus resources on a few key problem areas where the Agency can have an impact on non-farm enterprise development.

It is obvious that policy reform must be a main component of the program. In virtually every country in the region where analyses of non-farm enterprise have been undertaken to determine impediments to their expansion, policies that distort the economic environment, generally in ways that have adverse impacts on employment and economic growth, have been found to be among the major, if not the principal constraints to more rapid development of non-farm

enterprise. Thus, we intend to be active in the area of policy reform. The critical internal task in this area will be to find the most effective ways to influence public policy as it affects growth of non-farm enterprise.

Beyond a concentration on policy and an explicit understanding that the program will be working to develop private sector non-farm enterprise, the approach and content remain to be determined. At present, given the Agency's limited in-house experience and knowledge, we are not in a position to make the difficult decisions about narrowing the program. In the course of the next few years through careful monitoring and evaluation of ongoing projects we expect to develop a carefully framed strategy.

POPULATION, HEALTH, AND NUTRITION

Although these topics are dealt with separately in the sections that follow, the Asia Bureau strives to bring about the greatest possible integration of programs in these three fields. To the extent that Asian governments also seek to combine services wherever possible, we encourage the trend in this direction. However, we remain mindful that premature integration or combination of services can result in a weakening of program impact. This has been particularly true of family planning where such services have been combined with more general health services. Nonetheless, the natural mutual reinforcements among family planning, maternal and child health, and child nutrition are so strong that the Bureau will continue in its field programs to identify and encourage the most cost-effective combination of population, health, and nutrition programs and services.

Subsector: Population

From a demographic standpoint the Thailand-Burma border represents the "great divide" in Asia (Table I). To the east of this border, fertility is declining or apt to decline soon. To the west, the

demographic outlook is grim save in Sri Lanka. Our analysis suggests that Thailand and the Philippines are likely to achieve a crude birth rate (CBR) of 20/1000 by the year 2000. Indonesia has a good shot at it. To the west of the Thailand-Burma border, only Sri Lanka is considered likely to achieve a CBR of 20 by 2000; India, perhaps; and Bangladesh, Pakistan, Burma and Nepal are unlikely to succeed.* The nine countries of which we are speaking represent around a quarter of the world's population. The countries "likely" to achieve a CBR of 20 by 2000 (the Philippines, Thailand, and Sri Lanka) in 1982 had a combined population of over 115 million. India and Indonesia, the two "possibles" in the analysis, had more than 860 million people and accounted for over 70 percent of the nine-country total. The countries which are deemed unlikely to achieve a CBR of 20 by 2000 -- Burma, Pakistan, Bangladesh, and Nepal -- had 237 million people.

The selection of a crude birth rate of 20/1000 seems reasonable as a generalized long-range target for the Asia Bureau. However, a more realistic estimate for the region as a whole, and the one selected for this strategy, is a CBR of 25 for the nine countries by the year 2000. The weighted average population growth rate under this assumption would be around 1.4 or 1.5 percent per year. Once a country has reached that level, outside donor inputs will be carefully reviewed to determine whether or not any further support is required.

Levels of host country and external resources required to achieve the overall target of CBR=25 by the year 2000 should be commensurate with the three basic determinants of family planning program effectiveness: political commitment, administrative capability, and the socio-economic and cultural environment that conditions motivation to control family size. Each of these major sets of "determinants" are the basis for each of the country analyses that follow.

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* This analysis follows a framework developed by the late Bernard Berelson for assessing the probability of countries achieving significantly reduced fertility by the end of the century. Berelson's standard is a CBR of 20/1000.

The "Likelies"

Thailand -- Recent data suggest that Thailand has one of the most successful fertility control programs in the developing world. The crude birth rate is estimated to be below 30/1000 -- and declining rapidly. There is every reason to believe that this highly successful program will achieve a CBR of 20 before the end of the century. RTG ability to assume responsibilty for program costs is expected to increase gradually. Hence, donor phase-out will also be gradual. For A.I.D.'s part, we are committed to support the program through 1984 at a level of around $4.5 million per year. After 1984 the level of support will depend on Thai Government requirements, other donor plans, and A.I.D.'s assessment of RTG requirements. It will almost certainly decline. Bilateral assistance may cease altogether.

The Philippines -- While optimism about the Philippines is borne out by recent evidence of significant fertility decline, the Philippines, unlike Thailand, has failed to develop a truly effective family planning service delivery system or to implement an effective fertility control program. This may in part be due to the attitude of the Roman Catholic Church vis-a-vis family planning, which has caused the Government to move with considerable caution in the provision of these services. However, factors which are most closely associated with declining fertility show up quite favorably in the Philippines, especially female primary education, literacy, income per capita, and infant and child mortality rates.

There are few countries in which the truly effective administration of family planning program activities would result in more rapid fertility decline than in the Philippines. Therefore, the centerpiece of any strategy must be the development of plans to assure the availability of fertility control services to the entire population of couples of reproductive age.

In the near term, the A.I.D. strategy will be to continue to support the Contraceptive Outreach scheme in order to attempt to assure the availability of family planning services at the barangay level and to encourage private sector contraceptive distribution and sales activities. Over the longer term, A.I.D. will work with the GOP to identify cost effective mechanisms for combining family planning and other primary health care services.

Sri Lanka -- Sri Lanka appears to be a country in which fertility decline has occurred despite the recent absence of a national fertility control program, although contraceptives have been widely

available for some time. The crude birth rate is under 30/1000 and the population growth rate is somewhere around 2.0 percent per year. At the moment, A.I.D. is providing population assistance to Sri Lanka only through centrally funded intermediaries. The Mission will make a determination concerning the need to provide bilateral population program support after it has completed an evaluation of centrally funded activities and an assessment of the demographic situation in Sri Lanka as part of a health sector assessment in late FY 1983. There has been a recent and somewhat disturbing upturn in both the CBR and the population growth rate that will be carefully considered as part of this assessment and that could result in a decision to seek agreement with the GSL on direct bilateral population assistance.

The "Possibles"

Indonesia -- This poor country, in which the "development" indicators are generally unfavorable in terms of fertility decline has demonstrated that family planning programs can overcome substantial socio-economic and cultural obstacles if political commitment and administrative capability are sufficiently strong. The crude birth rate has dropped from over 40/1000 in the early 1970's to the mid to low 30's in Java and Bali today. Prevalence of contraceptive use ranges from 25 to 45 percent of married women of reproductive age on Java and Bali. These impressive results have been brought about through sustained high level commitment to the family planning program and the translation of that commitment into outstanding administrative performance and powerful peer pressure at the local level. However, there is considerable debate regarding Indonesia's capacity to achieve and sustain an overall CBR of 20/1000 by 2000. While the gains to date have been impressive, it is arguable that these gains cannot be extended to the 20/1000 threshold without substantial improvements in the overall standard of living.

It is clear that A.I.D. will need to remain involved in the provision of population assistance in Indonesia, albeit on a scaled down basis, for some time to come. This assistance should include significant support to research efforts aimed at discovering additional policy initiatives which may contribute substantially to achieving the CBR=20/1000 goal by the year 2000. This research should focus on the Outer Islands where the prescriptions that succeeded in Java-Bali may be inappropriate and where new and different approaches may be required.

India -- India's vastness makes it very difficult either to characterize the country or to prescribe strategies for its development. While the crude birth rate is in the mid-30's, the range between the lowest state and the highest is from just under 30 to well over 40.

It seems fairly clear that a couple of major policy initiatives are required nationwide in India. The first is to broaden the range of contraceptive services available to the general population. Second, the central government must give higher priority to family planning and must provide greater support to those who advocate fertility control within India.

The national family planning effort (called "family welfare") has enlisted the support of international donors. Most noteworthy about the approach is the desire to limit donor efforts to specific geographic sub-units of the country. In addition, the Indian Government has determined that its family planning program activity will be fully integrated with the provision of health services. Thus, A.I.D. program support is welcomed to the extent it is incorporated in a broader health context.

The Asia Bureau finds both emphases congenial and is presently financing an Integrated Rural Health and Population Project in five Indian States. In addition, A.I.D. is developing with the GOI a major Family Planning Communications and Social Marketing of Contraceptives Project which should greatly expand the availability of non-clinical contraceptives throughout India. Sustained support for Indian family planning efforts will be required at least through the end of this century, especially in those (mostly northern Indian) regions of highest fertility.

The "Unlikelies"

Bangladesh -- The prospects for Bangladesh are grim. The population policy in Bnagladesh represents a dilemma: given existing population densities and the current rate of growth, fertility control is an absolute necessity. Yet, dramatic fertility reduction can probably not be achieved in the short run becasue of the weaknesses of the administrative system, the inability of political leadership to command ahderence to national policies, and a socio-economic and cultural environment that is somewhat inhospitable to family planning. While there are indications that significant numbers of Bangladeshi couples wish to limit their fertility, it is not at all clear that the Government is able to deliver services in an appropriate manner.

The strategy we advocate for Bangladesh has the following characteristics: articulation of modest, short-term objectives; a search for innovations that can be replicated on a broader basis; incorporation of experimentation before nationwide implementation; incorporation of demographic goals and objectives into planning in other development sectors; and the search for approaches that maximize community involvement and peer pressure in population planning activities. There are no short-term solutions to the population dilemma of Bangladesh. A.I.D. must be prepared for a long-term commitment to the program and must avoid pressing prematurely for unachievable results. Public and private distribution mechanisms must be utilized to their maximum.

Pakistan -- With a population growth rate of nearly 3.0 percent per year and a crude birth rate in the mid-40's, Pakistan has a population problem of immense proportions. Perhaps no Asian country faces a bleaker demographic future than Pakistan because no country has been disappointed with family planning program efforts in the past as repeatedly and dramatically as Pakistan has. Thus, there is something of a crisis of confidence. The country desperately needs a population program success in order to reestablish some self confidence among its managers and fieldworkers.

The current Government, with strong personal support of President Zia-ul-Haq, is committed to a major population/family planing effort. The government's Population Welfare Plan (1983-87) recognizes the seriousness of the situation by placing special emphasis on population activities and calling for renewed donor support. Implementation of the Plan was delayed until major donor support was assured in late 1982.

A.I.D. recently signed a Population Welfare Planning Project, providing primarily contraceptives, research and evaluation, and institutional development support for this Plan. A.I.D. and the GOP are now in the process of designing a private sector Contraceptive Retail Sales Project. The World Bank and the UNFPA support other components of the Plan.

In the longer run, it will be necessary for the Government of Pakistan to sustain this renewed commitment by appointing and keeping highly competent managers in the population program, allocating increasing amounts of internal resources to the program, and continuously enunciating population policies which signal clear continuing commitment to fertility control. Under these circumstances, A.I.D. support would be required well into the next century.

Nepal -- Nepal alone, among these nine countries, shows a marked increase in the population growth rate since 1950. In that year, the rate of growth was 1.5 percent per year. In 1982, with declining death rates, the rate of growth was estimated to be 2.3 percent. Moreover, with a death rate around 20/1000, there is little hope that the growth rate will decline substantially any time soon. In a context of high infant and child death rates and very slow movement toward modern levels of development in such sectors as health, education or agriculture, it is extremely difficult to be optimistic about the prospects for rapid fertility decline. Thus, A.I.D. must regard Nepal in the same way as Pakistan and Bangladesh -- as a country to which we would be prepared to maintain both a development and population planning commitment for many years to come.

Burma -- Burma has maintained a staunch pro-natalist stance for many years. No population program support was acceptable. A.I.D. is now assisting Burma in the health field and we believe that some family planning may be introduced by the Burmese Government as a MCH/child spacing measure in the near future.

As Burma reestablishes external relationships it is conceivable that the official view of the link between population and national development will change to the point of recognizing that the number of people is less important than many other factors in determining a country's development potential. The Asia Bureau intends to be as responsive to such change as resources will permit, considering Burma's demographic significance.

The extremely close correspondence between level of development and fertility among the countries considered in this strategy paper should be noted. This is pointed out lest we lose sight of the fact that development is an important determinant of fertility levels and that the solution to the problem of rapid population growth in Asia is intimately bound up with the solution to the problem of general levels of poverty -- notwithstanding the important contribution that family planning programs can make in dealing with problems of excess fertility. Thus, the population strategy for the Asia Bureau cannot be separated from the broader development objectives and strategies of the Bureau. Indeed, the more inhospitable the circumstances in which a population program is located, the more important an explicit link between population and other development strategies becomes.

Table I

Asia Region Countries
Selected Demographic Data

Country	Natural Increase	Birth Rate	Death Rate	Total Fertility Rate
Pakistan	2.8	44	16	6.3
India	2.0	35	15	5.3
Bangladesh	2.8	47	19	6.3
Nepal	2.3	44	21	6.5
Burma	2.4	39	15	5.5
Sri Lanka	2.2	29	7	3.4
Thailand	2.1	28	7	3.7
Philippines	2.6	34	8	5.0
Indonesia	1.8	34	16	4.7

Subsector: Health and Nutrition

The primary goal of health and nutrition programs is mortality reduction. Specific attention is given to the reduction of infant and young child mortality since 25 to 50 percent of all deaths in the region occur before the age of six years. There is tremendous regional variation in infant mortality with national rates ranging between 40 and 150 deaths per 1000 live births (Table I)*. This variation stems from a variety of factors and seems to be

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* The Asia Bureau's treatment of nutrition is consistant with that of the Agency: to view it as a critical component of both agricultural policy (consumption planning) and health services (basic care delivery systems). In this section it is incorporated in the discussion of health services deleivery. The targetting of Title II food is intended to support nutrition in the MCH/primary health care delivery systems.

attributable to both differences in levels of socio-economic development, such as maternal education and household income and to uneven availability of bio-medical technologies that affect exposure to environmental risks, nutritional deprivation and high fertility. Thus, while it is evident that socio-economic determinants of mortality are an important factor in mortality analysis, this strategy considers more direct ways of reducing mortality with

biomedical technologies, using cost-effectiveness as the basis for selecting appropriate interventions. A secondary goal is the reduction of malaria in areas where execssively high morbidity has an improtant probable impact on productivity.

It has been established that categorical or single purpose health programs can be effective in reducing morbidity and mortality. Examples include malaria and smallpox programs. However, these programs are often expensive.

On the other hand, in dealing with problems that have multiple causes, such as diarrhea and malnutrition, the basic approach must be systematic and multidisciplinary. This implies a need to establish a system of primary care at the village level in order to institutionalize the delivery of services. However, the cost of maintaining such systems is almost certainly beyond the means of the countries of the region. Indeed, one of the most important issues facing the primary health care movement is the financial one: who pays for primary helath care? Clearly, the countries of Asia, even with substantial donor support, do not have the resources to sustain high quality comprehensive primary health care service delivery programs. Thus, much of the cost of service delivery will have to be borne by sources other than national governments, including beneficiaries, local communities, and local governments.

Because of the enormous cost implications of primary care, the Bureau has adopted the concept of selective care: supporting the development of village-based services which emphasize high quality of care for those at greatest risk of death (infants, young children, and indirectly, women of reproductive age). The emphasis on mortality (as opposed to general morbidity) underscores the importance of limiting the number of services to the few of highest priority that paramedical village-level workers can effectively deliver.

Having identified the primary target and the most appropriate delivery vehicle, it remains to identify the most appropriate set of

health interventions. "Most appropriate" here refers to those technically proven, administratively feasible interventions that provide the most cost-effective means of achieving the desired mortality and morbidity reduction. The set of "most appropriate" interventions will vary depending on the particular local conditions; however, it is likely the set or package of services will include some combination of the following:

1. Early case detection of diarrhea and oral rehydration therapy;

2. Innoculation of women of childbearing age with tetanus toxiod to prevent neonatal tetanus;

3. Family planning services, including counselling and contraceptive supply;

4. Improved prenatal care, encouragement of breast feeding, and early detection of malutrition;

5. Immunization, generally for tuberculosis, measles and DPT (Diphtheria - tetanus - pertussis) and polio; and

6. Malaria treatment (anti-malarial drugs for fever) in the context of primary care, plus source reduction and house spraying for control.

Water and sanitation projects are not included in the basic package because they are very costly, especially in rural areas, and provide limited health impact. Thus, it is unlikely that A.I.D. will have resources in the types of water supply and waste removal systems that have been shown to be necessary to produce statistically significant improvements in the infant and child mortality rate. On the other hand, water and sanitation projects can be defensible when host country resources are substantial; when commitment is high; when significant amounts of infrastructure are already in place so that marginal additional investments will premit widespread coverage; and perhaps most important, where village social structure permits true cooperation in the maintenance of the system and in carrying out necessary sanitation measures. In countries where these conditions exist, (e.g., Thailand, Philippines, and perhaps Sri Lanka) water and sanitation projects may be undertaken.

Using health indicators, the Asia Bureau countries can be broken down into three general categories: (1) the more advanced group, consisting of Thailand, the Philippines, and Sri Lanka, with infant mortality rates (IMRs) below 75 per 1000 births; (2) the middle group consisting of India, Indonesia, and Burma with IMRs between 75 and 125; and (3) the less advanced countries, including Bangladesh, Nepal, and Pakistan, with IMRs in excess of 125.

The more advanced countries can be characterized as having established and developed health service delivery systems with fairly comprehensive coverage. They also have large private and traditional sectors providing health services. Bilateral support in these countries will increasingly focus on technology transfer and research to improve the quality of already existing systems and institutions and to encourage alternative services provision by the traditional and private sectors. Commodities and local currency costs will be included only on a limited basis for pilot studies or when part of a program designed to produce policy reform.

Malaria control and water and sanitation may also be considered for support in these countries if it can be shown that such an investment is likely to produce significant gains in lowering the IMR.

The middle group of countries have initiated the establishment of national basic health service delivery systems, but are still far from achieving total coverage. They are characterized by weaker administrative structures and support systems, less active private sectors, and large traditional sectors than the more advanced group. Efforts will be made to improve and expand rural primary health care systems, especially in areas of high infant mortality. Technical assistance and training support will be provided to strengthen institutional capability to manage cost effective and self-reliant systems. Efforts will also be made to increase the involvement of the traditional sector. In addition to support for service delivery systems, practical, field-oriented biomedical and operational research efforts are being encouraged. Given the weaker financial position of these countries and the less developed state of the service delivery systems, consideration will be given to funding infrastructure costs and commodities, especially in those areas of highest mortality.

The less advanced countries have very poorly developed primary health care systems, effectively covering only small portions of the rural areas. They have large traditional sectors and some private sector activity usually in urban areas. These countries are characterized by persistently high infant mortality rates. It is clear that there is a need for long term support to improve and expand the basic infrastructure for service delivery. This includes support for improvement of management, training, information, and research. In addition, consideration must be given to funding drugs and other commodities, capital costs, and some local currency expenses. However, care must be taken not to establish an unrealistic recurrent cost burden for the governments. Particular attention will be given initially to those interventions that are likely to have the most significant effects on mortaltiy reduction.

Table II

Infant Mortaltiy Rates
for
Asia Regional Countries

Country	Infant Mortality Rate*
Sri Lanka	37
Thailand	55
Philippines	55
Indonesia	93
Burma	101
India	123
Pakistan	126
Bangladesh	136
Nepal	150

*Number of deaths per thousand live births.

Source: Population Reference Bureau

EDUCATION AND HUMAN RESOURCES

Education will remain an area of fairly limited involvement for the Bureau. Indonesia tends to be the exception, and we foresee modest expansion of technical assistance there. Also, we are keenly aware of the importance of female education to development achievement in a wide variety of areas. Though still in the exploratory phases, we may be able to identify feasible activities in that area. Their budgetary impact is not likely to be major.

The regional stategy will be to place emphasis on strengthening agriculture education, the internal efficiency of education systems, and basic education and skills training, particularly of girls and women (especially in South Asia).

In view of the fact that national education budgets often represent the single largest social sector and considering that the U.S. has much to offer LDCs in technical assistance to overcome some of the major management problems facing administrators of LDC education programs, we will seek opportunities to work at the policy level with ministries of education to improve their capacity to collect and analyze data, plan education and training programs, develop research and experimentation, and improve internal efficiency. Such an effort will begin this year in Indonesia.

In the countries with the lowest literacy rates, principally Pakistan, Nepal, Bangladesh and parts of India, we will seek ways of supplementing other donor programs which currently support basic education and skills training, particularly for females. A.I.D. undertakings will place primary emphasis on policy reform and policy related research.

Education activities carried on by PVOs throughout Asia, such as skills training in the South Pacific and elsewhere, will continue to receive support. Also, wherever appropriate (e.g., Indonesia and Nepal), efforts to experiment with potentially cost effective alternatives utilizing modern educational technology will be encouraged (e.g. radio education).

We will continue to support project related training as well as institutional strengthening of key private and public institutions in fields not otherwise provided for by current sectoral projects, and through general participant training projects such as those in Burma, Indonesia, the Philippines, Pakistan and India. New training projects will be considered if focused on specific institutional strengthening objectives or if focused on types and levels of training widely needed in key development sectors.

Training supported by A.I.D. in this regard will support private as well as public sector activities and institutions. Likewise, training programs will be required to provide increased opportunities for women, and where this is not attained, adequate justification will be required. As our programs evolve in Southeast Asia, we are likely to see programs of increasing scientific and technical sophistication, which we hope to finance and least through loans.

ENERGY AND NATURAL RESOURCES

The A.I.D. Asia countries use small amounts of energy per capita compared to the industralized countries. But their consumption of energy is increasing rapidly. Between 1970 and 1978, overall energy consumption grew by 100 million tons of oil equivalent to 357 million TOE. The A.I.D. Asia countries consume a mix of commercial and traditional energy. Fifty percent or more of the total energy consumed in Sri Lanka, Burma, Pakistan, India, Bangladesh, and Nepal is traditional fuels, including wood, charcoal, dung, and agricultural residues. These traditional fuels are used primarily in households and small industries.

Although the bulk of these fuels are consumed in rural areas, a significant percentage of the energy consumed in urban households and commercial establishments (e.g. 48 percent in Pakistan) consists of wood, charcoal, and other biomass. Pressures on the bioresource base from both energy and non-energy uses are great and have become particularly severe in Bangladesh, India, Pakistan, and Nepal.

Commercial energy inputs, including the energy embodied in fertilizer and chemicals, are essential to increasing agricultural and rural productivity. Diesel fuel for pumps, generators and vehicles; grid-supplied electricity for lighting, pumping, processing machinery, refrigeration, home industries and public health and educational facilities; and kerosene for lighting and cooking are the principal types of commercial energy used in Asian rural areas. Mechanized pump irrigation is critical to agricultural production in arid South Asia, particularly in Pakistan, India, and Bangladesh.

Most of these petroleum products and some of the grid electricity come from imported oil. Except for Burma and Indonesia, the A.I.D. Asia countries are all net oil importers. The rising cost of petroleum imports during the 1970s has rocked the economies of these importing countries and greatly contributed to the ballooning of their external debt. In 1980/81, these countries spent from 40-80 percent of their export earnings on imported oil, compared to 10-20 percent in 1973/74. The development of indigenous energy supplies that can reduce oil-import dependence therefore remains a central policy priority of Asian countries.

A strong positive correlation exists between per capita GNP and per capita commercial energy use. This relationship suggests that for the low-income countries of South Asia to reach the income levels of the Philippines and Thailand, substantial increases in per capita energy consumption will be needed, i.e. a doubling or tripling. Where will this energy come from and how can private and public resources be mobilized to explore and develop existing indigenous energy sources?

Although some oil resources remain to be found in Asia countries, e.g. Shell Oil recently discovered commercial oil deposits in Northeast Thailand, the principal near and medium-term alternatives to oil are natural gas (Indonesia, Thailand, Bangladesh, India, and Pakistan); coal (principally India, Indonesia, Pakistan, Thailand and the Philippines); hydro (all except Bangladesh); geothermal (the Philippines and Indonesia); and wood/biomass (all countries). For Sri Lanka, which has no known oil, gas, or coal resources, renewable energy and peat are the principal indigenous options. Energy resource exploration and production is a highly capital intensive business in which the private sector must contribute the bulk of the risk cpaital. While some private investment is currently involved in natural gas, coal, geothermal, and wood/biomass development, policy and institutional changes are necessary to encourage the levels of investment needed to develop indigenous energy resources. The development of improved technical and managerial capabilities in the private and public sectors of these countries is essential, as is the introduction of innovative financing arrangements between public and private sources.

The objective of the Asia strategy in this sector is two-fold: (1) to help overcome the energy and natural resource constraints to rural development, with particular emphasis on increasing productivity in agriculture and rural industries; and (2) to help meet the basic energy needs of the poor. The program will concentrate on policy formulation and management of forest and bioresource systems.

The first priority is to develop sound national policies in the energy, forestry and environmental sectors that incorporate and address the needs of sustained agricultural and rural development. Technical assistance and training should be provided to analyze needs, uses, resources, and policy options in these interrelated sectors. Key policy issues include the pricing of petroleum products and electricity, the costs and benefits of rural electrification, the role of forestry extension organizations, the implications of current land use trends in rural areas, and the economic costs and benefits of protecting tropical forests. The focus of efforts in the policy reform area will be on South Asia where the fuelwood problems are the most severe and the environment for private investment the most constraining. Sri Lanka will continue to be a showpiece in our efforts to develop sound environmental policies and programs.

The second element of the sector approach is to develop the human and institutional capability to formulate and manage programs that

transfer, develop and adapt new and existing technologies and approaches to solve energy and natural resource problems. Centers of excellence in training and research should be supported at the national and regional levels, in close cooperation with other development assistance organizations. The two prime areas of focus will be: (1) bioresource management, including biomass production and conversion and watershed research; and (2) coal conversion technologies, particularly coal carbonization and briquetting as a substitute for wood and petroleum. A major expected accomplishment will be the establishment, in cooperation with the S&T Bureau, of a forestry research network in Asia. A Asia Regional Forestry and Bioresource System Management project is proposed for FY 1984 to initiate this effort.

The third element is the promotion of private investment in wood and economically viable alternative energy sources, e.g. coal. However, substantial capital assistance in the area of conventional energy will likely be confined to Pakistan. Special emphasis will be placed on identifying potential wood markets and working with private companies and credit institutions in the four main bioresource subsystems: (1) production; (2) harvesting, collection, and transportation; (3) processing and conversion; and (4) distribution, marketing and consumption. Experience from the Philippines wood energy project and the India social forestry projects will be of critical importance in demonstrating the potential for private participation in biomass production and conversion schemes.

New alternative energy technologies are of keen interest to many Asian countries. In this area of growing stiff competition with Japanese and European suppliers, A.I.D. should work closely with U.S. private industry in promoting licensing and joint venture arrangements that meet development needs. Special attention will be placed on the current group of PRE designated countries, i.e. Thailand, Indonesia, Sri Lanka, and Pakistan.